

# Professional Standards

What is CPESC & CPSWQ and why are they important in the land development process?

| By Jeffrey R. Keefe, P.E., P.S., CPESC, CPSWQ

Two of our Professional Engineers (P.E.s) were ordering business cards after obtaining their CPESC and CPSWQ certifications. The printer was having trouble fitting the designations in the small space allotted on the card and asked, "do you really need all of those letters after your names — isn't P.E. enough?"

His question got me thinking. Do our clients understand what CPESC and CPSWQ designations are? Do they understand their importance as they relate to commercial and residential development projects?

CPESC stands for Certified Professional in Erosion and Sediment Control. According to CPESC Inc., the organization that administers the certification program, "CPESCs have educational training, demonstrate expertise in controlling erosion and sedimentation, and meet certification standards."

Over the past 20 years, the public, governmental agencies — particularly the United States Environmental Protection Agency — and municipal leaders have become increasingly concerned about erosion control.

Erosion is a process that occurs naturally over time. However, the removal of vegetation or changes in ground contour from activities such as site development or construction activities accelerates the erosion process and creates sediment. If not properly managed, sediment can flow into rivers, streams, ponds and lakes — quickly and in large amounts. Unmanaged sediment can pose a threat to aquatic systems. It can also plug storm sewers, reducing their capacity and causing flooding and costly maintenance of those water conveyance systems.

Professionals with CPESC certification must pass a peer-review process to evaluate their education and experience in erosion and sediment control. They must also have a minimum number of years of professional-level experience in the field, are required to take a rigorous exam testing their knowledge of erosion and sediment concepts, and must comply with a strict code of ethics.

In Ohio for example, the Ohio EPA mandates that commercial and residential development projects with more than one acre of disturbed area must have Stormwater Pollution Prevention Plans (SWPPPs) on hand during construction in order to obtain permits. Generally speaking, these SWPPPs include erosion and sediment control measures that employ best management practices (BMPs). BMPs



*The retention basin and stormwater management facility designed for the Kohl's store provides the required storage while being flexible for future expansion.*

Similar requirements are established for professionals with CPSWQ certification. CPSWQ stands for Certified Professional in Stormwater Quality. CPSWQs have extensive knowledge in effective and economical methods of addressing stormwater quality.

Addressing stormwater management concerns is becoming more important for developers, as state and local requirements are becoming increasingly stringent.

address ways to control stormwater runoff, reduce erosion, and prevent sediment created by construction activities from migrating off-site and potentially polluting private property, wetlands, creeks, rivers and lakes. BMPs can include measures such as installing and maintaining silt fences and sedimentation ponds, screening debris at pond outlets, or phased planting and re-

seeding of parts on a site's re-graded surface.

On the local level, most counties and municipalities are requiring SWPPPs before allowing construction activities to take place. A well-designed stormwater management plan can answer a municipality's concern, "how can this development be designed to minimize the impact to the environment and the public, while accommodating the inevitable growth occurring in my community?"

Coming to the approval table with SWPPPs that are compliant with state and local regulations can make the permitting process faster and less painful. A sound stormwater management plan can address the shorter-term, project-specific goals of the developer, as well as the longer-term concerns of the community and the environment.

Although the ever-expanding stormwater and water quality requirements are becoming more and more burdensome, developers recognize that they need to be addressed.

Case in point is a recent commercial development project for which KS Associates provided site planning, design and consulting services. KS Associates worked closely with Liberty Development Company to develop a stormwater management solution for Lighthouse Village, a 500,000-square-foot retail project anchored by Kohl's and Home Depot, located in Lorain (OH).

According to Tom Kuluris, President of Liberty Development Company, "The KS team helped us understand the importance of controlling sediment to minimize the physical impact of our project. They were also up to speed with state and local requirements when it came to stormwater management, helping to avoid roadblocks and project delays. They offered a solution that involved designing a retention basin that satisfied not only our immediate need



A silt fence was installed along the perimeter of the Lighthouse Village retail development to reduce the amount of sediment flowing into nearby wetlands.

## Physical Reality

Unmanaged erosion and sediment can increase maintenance costs for owners, whether public or private. It can also cause environmental impacts on downstream receiving waters. CPESC and CPSWQ certified professionals have specific training in issues that can help reduce adverse environmental impact and maintenance costs.

## Regulatory Reality

Local governments have been mandated to enforce erosion and sediment control requirements. Professionals with CPESC and CPSWQ certifications can add value during the design and construction phases, ensuring compliance with these mandates. In fact, more local governments are mandating that SWPPPs in their communities be prepared and/or reviewed by certified professionals.

to accommodate our first tenant, the Kohl's store, but also tenants that come on board during future phases of the project."

The basin was designed with excess capacity and features an outlet structure that can be easily modified after each new phase is added to the facility. A creative, flexible design that meets current and future needs, while meeting local and state regulations, was one of the key factors in making this project a success.

So, back to answering our printer's question — "do you really need all of those letters after your name?" Technically, P.E.s don't "need" to be CPESC and CPSWQ certified to design stormwater plans that meet their clients' requirements. However, the designations call out a certain degree of knowledge of specific and ever-growing erosion, sediment and stormwater management issues. And as regulations become stricter, more local governments are mandating that SWPPPs be prepared and reviewed by certified professionals. Having a high degree of knowledge in these areas can be a great asset to the public and to the client, and can add value to the project. **LDI**

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