



The Certified Inspector of Sediment and Erosion Control Newsletter

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Board of Directors News

By Staff

This year we say goodbye to one of our Board of Director members-Paul Taylor. Paul has been an influential member who has brought a common sense approach to many discussions over the years he has sat on the board. It is with great sadness that we say goodbye, but we wish him the best in his very busy life. We know we can always call on Paul for his insight and assistance when the need arises. Thank you for your service to CISEC, Inc.

We welcome Yolanda Leal as our newest member to the Board of Directors. Yolanda is a CISEC registrant and a CISEC instructor. She brings knowledge of being an inspector in California during an interesting ecological time of drought and flooding. We look forward to working with her for the next three years.

The founder of CISEC, Inc., Jerry Fifield is also leaving the board as a voting member this year as well; but will remain for one more year in an advisory position as past president. We always value his experience and wisdom as well as the historical references he can provide since beginning the program in 2005. We are pleased that he will still be influential in developing our program and moving it forward. Thank you for your service and dedication to making CISEC, Inc. the most professional inspector certification program in North America.

CISEC Inc.'s Commitment to the ADA

By Staff

Recently, the CISEC Board of Directors received a very complimentary letter from an applicant with learning disabilities concerning the accommodations made for the individual. The applicant told of the instructor's warm and caring manner; the changes the instructor made so the applicant could take the class and the subsequent exam. The applicant explained how comfortable this was and that there was no feeling of being rushed in finishing the exam at their pace. This person passed the exam and is now a CISEC registrant.

This is what CISEC, Inc. does for applicants and registrants; we make every attempt to accommodate our applicants in whatever manner it takes to make their class and exam as flexible as necessary so they can do their best and become registered CISEC inspectors. We thank our instructors for being aware of these issues for applicants and applaud their willingness to do what is necessary for the applicant to be successful and become a registered CISEC inspector.

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Matting vs. Wattles

A Review Article for the Eddyville Oregon US 20 PME Project

By Tiffany Bucher, MPH, CPESC, CISEC #1231

Background

The erosion control plan for the fill slopes after each season of construction on the US 20 PME project include straw wattles, Flexterra flexible growth media, and an erosion control seed mix in order to stabilize the slopes. Over the winter of 2014 many of the straw wattles that were trenched into newly placed fill slopes did not perform as well as was intended. The seed mix was effective in some areas, not in others. The root system of the seed mix did not extend deep enough into the soil to prevent slope failures on the steeper slopes.

Data

Throughout several winter storms we had numerous superficial slope failures in many areas on the project. The straw wattles did not seem to be of any help in preventing these failures. In fact, several of the slope failures originated at wattle locations. The reasoning for this is that straw wattles saturate very quickly and dry slowly. Once fully saturated, water begins to pool behind the wattle resulting in surficial slope failures. Predominately wattles, along with other factors (slope geometry, soil type etc.), seem to have been the reason for the many surficial failures seen on the project, especially during heavy, prolonged rainfall. Many shallow slope failures occur when the rainfall intensity is larger than the soil infiltration rate and the rainfall lasts long enough to saturate the slope up to a certain depth, which leads to the build-up of pore water pressure. This is what we seem to have happening here on the Eddyville project. Given the frequency of the rain events in Eddyville, the project received a continuous wetting of the slope when the majority of the failures occurred

BMP Installation

Once a shallow failure occurred, ODOT and Scarsella agreed that installing type E matting over the affected area would serve as a better BMP. This method has shown to work very well, keeping the slope from eroding any further and preventing additional failures. To further prevent erosion and runoff, Scarsella removed the wattles, cleaned the sediment and installed matting where the surficial failures occurred. Along with installing matting, Scarsella blew and hand spread straw, which was very beneficial. In much of the areas where the straw was placed, vegetation has now been established.

2015 Season Two Constructability – Installing Matting Instead Of Wattles

This upcoming construction season we will be building the embankments with primarily native non-durable rock. Using this type of embankment material will make the installation of wattles exceedingly difficult. All of the slopes will need to be track walked before wattles can be installed. We saw this past construction season that track walking on slopes comprised primarily of this native non-durable rock can be very difficult. Attempting to track walk on top of these rock slopes causes the dozers to slip or spin their tracks, which damages the surface of the slope. The next challenge with installing the wattles on non-durable rock slopes is the actual installation itself. The straw wattles need to be trenched into the surface of the slope. Trenches need to be perfectly straight and the entire wattle row needs to be at the same elevation. To do this, laborers use hand tools to dig a small trench and install the wattles. Digging these trenches on the surface of a slope built out of compacted non-durable rock will be close to impossible. We saw a few isolated examples of this exact scenario this past fall, and the results were not good. Laborers struggled to dig the trenches, and the trenches that they were able to dig did not follow the ground contours because they had to route their trenches around larger rock fragments that they were unable to trench through.

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Matting vs. Wattles

A Review Article for the Eddyville Oregon US 20 PME Project (Continued)

Continued from Page 2.

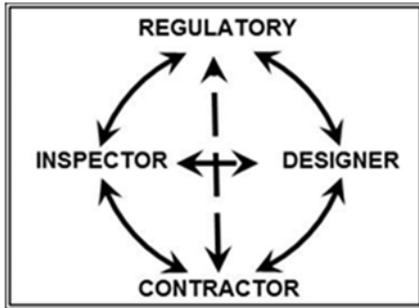


Discussion

Replacing straw wattles with Type E matting will eliminate many of the difficulties and problems with straw wattles. The slopes will not have to be track walked, and the matting only needs to be trenched into the ground at the very top of the slope. One of the primary concerns with matting has been obtaining constant, continual contact with the slope. If the matting is installed on a smooth engineered slope with staples every two feet on center, we shouldn't have much trouble maintaining continual ground contact. The matting that we have installed on all of the slope failures this past winter has been placed on very uneven ground. Even with this uneven surface we have managed to keep the matting in fairly good contact with the soil, and the matting has been functioning very well.

Communication--The most important (and overlooked) construction site BMP

By Jerald S. Fifield, Ph.D., CPESC, CISEC #0006



The figure at the left illustrates the interdependency of individuals and/or agencies if the goals set forth in the Clear Water Act (CWA) and EPA requirements are to be met. Notice there is no one group of individuals or agencies that must be accountable for effective sediment and erosion control. Instead, everybody must be responsible and be able to communicate with each other. Essentially, interaction between all working on a construction project must occur.

Regulatory Agencies

Regulatory agencies must clearly communicate with designers, contractors, and inspectors about their requirements. Clearly defined requirements for drawings, identifying acceptable BMPs and recognizing their limitations, discussing timing issues for installing BMPs, and allowing for innovation must be the norm.

Regulatory agencies must also clearly communicate submittal requirements and let the applicant know how and when plans will be reviewed and processed. Also, if a regulatory agency requires professionals to develop sediment and erosion control plans, then similarly qualified people must review and approve the submittals.

Designers

Designers must complete site visits before, during, and after construction activities occur. Pre-construction site visits help identify critical habitats, observe existing vegetation, develop a "feel" for the site, and identify potential problems. By completing site inspections with a CISEC during construction activities, designers can learn about problems that contractors and inspectors experience daily. Also, designers need to complete post construction site visits to assess whether erosion control measures are minimizing downstream discharges of sediment.

Plans are a "first appraisal" of what needs to be completed on a construction site and must be developed for the contractor! This requires designers to communicate what is required for pre-, during, and post construction activities. Plans must have numerous notes on each page, adequate contour lines, identification of BMPs, and clear instructions as to when something is to be completed.

Contractors

Contractors will make or break a sediment and erosion control plan developed by designers. If the plan is confusing, then only minimal measures will be installed. However, when plans clearly communicate what is needed, what is to be installed, and when installation is to occur, effective sediment and erosion control on a construction site will become a reality. *Continued on Page 4.*





Communication--The most important (and overlooked) construction site BMP (*Continued*)

(Continued from Page 3) Since construction activities can potentially disturb and expose vast amounts of land, every effort must be taken to minimize sediment leaving a site. Thus, contractors must take sediment and erosion control plans seriously. The CWA mandates severe fines and EPA is serious when they identify the contractor as being responsible for implementing the plan.

CISEC Inspectors

If inspectors do not understand construction plans, more than likely they will not know how to read sediment and erosion control plans. Plans are more than just symbols on a piece of paper! They are a blue print for contractors to follow. Thus, CISEC registrants have to know implementation schedules, where and when BMPs are to be installed, what BMPs are to be maintained or eliminated, and fully understand the limitations of BMPs.

CISEC registrants must also know their own limitations when modification and updates of a sediment and erosion control plan is required. This can only be accomplished by maintaining communications with designers when major modifications are required. Keep in mind that if a CISEC registrant mandates modifications to a plan and designer approval is not obtained, then he/she and his/her employer may be liable for any damage that may be caused by the changes.

The CISEC Program by a CISEC-IT

By Matthew Murray, CISEC-IT #0107

CISEC is a nationally recognized certification program that teaches and encourages its recipients to perform thorough inspections as associated with construction activities. CISEC puts great emphasis on ensuring ethical professionalism when conducting inspections and reporting of findings. Being a part of the CISEC-IT (In Training) program has helped provide me with the tools necessary to do just that. CISEC presented an excellent in-house training session at our office which went over the fundamentals of performing a construction site inspection, the importance of accurately recording observations from the field and how to clearly communicate these findings through inspection reports.

As a third party inspector, it is important for me to be able to accurately report what I observe to our clients. It is also as equally important to be able to do so in a manner easily understood and that avoids mandating corrective actions. As a CISEC-IT, I am also encouraged to reach out to inspection professionals for guidance and to learn from their experiences in the field. One of the many benefits to this program is that the CISEC organization can help facilitate this. As a young professional, the CISEC-IT certification is a positive stepping stone in my career.

This program focuses on the regulations associated the construction general permit of the federal government; how to adequately inspect sediment and erosion control BMPs and their effectiveness as well as the principles of sediment control and other pollutants relating to construction activities. As a CISEC-IT, it is my responsibility to take advantage of training opportunities to work toward the goal of becoming designated as an official certified inspector in sediment and erosion control.

If someone does not yet have the required two years of experience to be an official CISEC, then they can apply to be a CISEC-IT. By doing so they will be trained on the basic fundamentals of performing a storm water inspection and the EPA regulations associated with construction activities, have the opportunity to talk to and learn from inspection professionals in their field, have the support of a nationally recognized organization in becoming a respected professional in the field of storm water inspections and be provided the resources and tools to further their education and stay current with a fast changing industry. The designation as a CISEC-IT not only shows that you are dedicated to your work but will also gain the respect of your peer and potential employers.

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www.cisecinc.org