University of Minnesota

Erosion and Stormwater Management News

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Inside

Sediment Log Research

Did you know that in addition to providing certification courses, the Erosion and Stormwater Management Certification Program also has an active research program?

The program is currently investigating the efficacy of a variety of types of sediment logs under different flow conditions. This research will undoubtedly provide insight into sediment log use on sites. We look forward to sharing our findings with future classes and at state-wide and national conferences.

Reminder postcards sent out

The Erosion Program will once again mail out a postcard to everyone that has a certification that expires in 2018 as a reminder to enroll in a recertification course. You can determine if you'll need to get into a recertification course prior to getting the postcard by reviewing the certification card that you received in the spring. If your card says you have an expiring certification in 2018, then you will want to get into a class before May of 2018 to make sure your certification does not lapse. Registering early will give you the best selection of classes, so look for the fall schedule in the mail and online.

Recertification Specialization

The Erosion and Stormwater Management Program is once again providing several recertification classes that each have a specific focus. These courses will provide updates on the regulations and fundamentals of the original certification course but will include two hours of content on a specific topic. These specialization courses allow you to recertify several times while also expanding your knowledge base.

This year the Design of SWPPP Recertification course is offered with specializations in Infiltration, Linear Construction, Ethics, and, new this year, Environmental Review.

The Site Manager Recertification will continue to offer specialization in Bridge Construction and, new this year, will offer specialization in MS4 regulations.

To find a specific specialization course, look in the Section column on the online schedule. For more information on these specialized recertifications, look for individual brochures at www.erosion.umn.edu or contact Rebecca Forman with the Erosion and Stormwater Management Certification Program at rebecca@umn.edu or 612-626-1258.

www.erosion.umn.edu
www.erosion.umn.edu/privacypolicy

ASK AN EXPERT!

What's Going on with the Rusty Patched Bumble Bee?

In an effort to halt the loss of an important pollinator, the U.S. Fish and Wildlife Service listed the rusty patched bumble bee (*Bombus affinis*) as an endangered species, effective March 21, 2017. This species was once widespread across the grasslands and tallgrass prairies of the Upper Midwest and Northeast, but as these ecosystems were degraded, fragmented, or converted to farmland, scientists noted a decline in *B. affinis* populations, along with many other species of pollinators. In addition, other threats such as disease, pesticide use, climate change are all thought to play a role in the decline of this species. *B. affinis* is now found in scattered sites occupying approximately 0.1% of its historical range (USFWS 2017).

The loss of pollinators such as *B. affinis* is alarming; these insects pollinate crops (contributing to our food security) and wildflowers (helping to keep native populations healthy). Bumblebees are even highly adapted to access the hard-to-reach pollen of certain species of plants: they engage in something called "buzz pollination" (aka, "sonication") whereby they produce strong vibrations that shake pollen grains off tightly-packed flower anthers. Honeybees are not able to produce this same effect; as a result, some plant species, including food crops such as blueberries, kiwis, and tomatoes must be pollinated by bumble bees.

Projects that include ground-disturbing activities may impact *B. affinis* in a variety of ways. In early spring, solitary queens emerge from hibernation and begin foraging and scouting sites for new nests. She will look for abandoned rodent burrows and other underground cavities to establish her colony. Colonies can range in size from a few hundred bees to over one thousand individuals. The colony works as a unit to collect nectar and pollen to sustain the colony and raise young throughout the summer. In late fall, however, the 'founder queen', males, and workers die, while the new queens choose a suitable site to hibernate (under leaves or loose dirt) and wait for the cycle to begin again. Depending on the location of ground disturbing activities, projects may dig up and destroy colonies and/or overwintering queens. Project siting and timing should be carefully considered in order to prevent "take" (defined by the Endangered Species Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct") of a federally protected species.

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Rusty patched bumble bee illustration by Elaine Evans