Guest Lecture: Mitigating the Impacts of Highway Construction
November 19th, 2021
6pm-7pm in ODB 162

An 8 hour training on Erosion Prevention and Sediment Control was condensed into 1 hour by Henry Barbaro, the MassDOT Stormwater Supervisor.

Main questions that will be answered throughout the presentation.
- What are the risks to the environment during project construction?
- How can we reduce the erosion impacts to water resources?

General notes
- Erosion control measures prevent large masses of soil from being mobilized, and sediment control captures soil particles that have eroded
- Potential for erosion is accelerated with construction
- Some primary factors that can influence probability of erosion: soil type, topography, vegetative cover, weather
- Surface cover is a good way to control erosion, but construction removes large swaths of surface cover (vegetation) all at once, leaving the land vulnerable.
- A Federal permit (EPA's Construction General Permit) is needed if the proposed construction leads to the disturbance of more than 1 acre of erodible land (which does not include the surface milling of pavement)
- Some management objectives: minimize soil exposure duration, install perimeter controls, erosion control practices, reduce runoff velocities, etc.
- A huge part of construction planning is/should be understanding the land features within the construction site
- Typical permit violations during construction: not using phased grading or providing temporary cover, no erosion/sediment control, no drainage inlet protection, no BMPs to minimize vehicle tracking on roads, dewatering or pollutant discharge, concrete washout, inadequate BMP maintenance/not enough training
- Some runoff controls include: preserving vegetation, check dams, wet ponds, surface roughening, blankets, tackifiers, inlet protection, sediment control barriers, silt fence, turbidity curtain, stabilized entrance/exit, dirtbags, dewatering practices, timber construction mats, street sweeping
- Protecting wetlands is regulated by both Federal and State laws in MA
- The most important and least expensive best management practice is good communication