



Memorandum

Wisconsin Department of Transportation
Division of Transportation System Development
Daniel R. Grasser, Administrator
Hill Farms State Transportation Building
4802 Sheboygan Ave., Room 451
Madison, Wisconsin 53705

Date: July 20, 2012

To: TS Chiefs, PD Chiefs, Regional Stormwater/Erosion Control Engineers, Regional Environmental Coordinators

From: Rebecca Burkel, BTS Director
Beth Cannestra, BPD Director

Subject: Guidance to address drought conditions on WisDOT construction projects

Governor Walker has declared a drought emergency for the entire state of Wisconsin. In response to that declaration and the conditions in the state the Wisconsin Departments of Transportation and Natural Resources are issuing the following guidance in order to address drought conditions on WisDOT construction projects.

Guidance for Erosion Control on DOT Projects

The attached guidance provides detail on how to obtain effective erosion control on WisDOT construction projects. The major points in that guidance are:

- Interior and perimeter erosion control efforts will be redoubled
- Alternative methods using a combination of seeding and mulch are provided
- In sensitive areas WisDOT and DNR staff will work together to ensure adequate protection.
- The ECIP will be amended to reflect changes made
- Contracts will be held open to facilitate re-seeding or application of additional materials

Guidance for Water Withdrawals on WisDOT Projects

The attached guidance provides detail on how water withdrawals will be handled during drought conditions. The major points in that guidance are:

- Water withdrawal requests will be coordinated through the DNR/DOT liaison process.
- All requests will be handled as quickly as possible so that project schedules are not affected, and low flow waterways are not adversely impacted
- No withdrawals will be allowed from
 - Trout streams
 - Smaller warm water streams that would be damaged by the withdrawal

Additional guidance relating to erosion control/seeding and water withdrawals will be issued as conditions change.

Questions on erosion control/seeding can be directed to:

Michelle Reynolds (WisDOT) 608-264-8417 or michelle.reynolds@dot.wi.gov

Questions on water withdrawal can be directed to:

Mike Halsted (DNR) 608-333-6453 or michael.halsted@wisconsin.gov

The Bureau of Technical Services along with the Bureau of Project Development and WDNR has developed the following strategy and communication plan to respond to drought conditions in Wisconsin:

Guidance for Erosion Control on DOT Projects in drought emergency areas

- 1) Project managers should re-emphasize perimeter and interior control by redoubling efforts to install and maintain effective best management practices at the perimeters of projects where runoff will escape or areas where internal slope and erosion issues can overtake completed work. Inspect, reinforce and maintain silt fences, ditch checks, bales, sediment traps and other installations. Due to the extremely dry conditions the soils have become hydrophobic, meaning they have developed a 'crust' from the lack of moisture. When we get rain it will initially be runoff of our projects since the ground is too hard for the water to saturate this has the great potential for runoff and sediment deposits well beyond our projects.
- 2) **SEEDING:** Per 630.3.3, the engineer must approve the method the contractor utilizes for the sowing of seed. When making this decision, the engineer should factor in the amount of rainfall predicted in the time it would normally take to establish vegetation from seed. If there will not be adequate rainfall, the engineer should not allow Method B (hydroseeding) and should instead select Method A. No pay adjustments will be made for this change. If Method A is used, all open topsoiled areas will be broadcast seeded first with granular fertilizer applied and then covered with one of the following (use the erosion control matrix to determine appropriate BMPs):
 - a) A dry application of polyacrylamide, Soil Stabilizer Type B, over the seeds and bare soil, then an application of mulch with tackifier to minimize erosion and protect the seeds from drought conditions.
 - b) Soil Stabilizer Type A, is a cementitious binder added to wood cellulose fiber mulch, or a bonded fiber matrix applied with conventional hydraulic seeding equipment. The stabilizer should create a hard seal over the ground and dry out quickly enough that the seed won't germinate, but sit dormant until rains re-wet the Soil Stabilizer.
 - c) A dry application of polyacrylamide, Soil Stabilizer Type B, over the seeds and bare soil, then an application of Erosion Mat covering the seed will give it protection from the birds, sun and wind. Be extra diligent about using proper installation, especially entrenching the leading edge so when it does rain the seed and slope do not get washed out from under the mat.
 - d) Other project specific methodology agreed on by the project leader, DOT project manager, regional stormwater engineer or erosion control specialist, DNR liaison, and contractor(s) to be used in environmentally sensitive areas or where measures are most practical for specific site conditions.If these soil stabilizer items are not already included in the contract they will be added via contract change order.
- 3) **MULCHING:** Due to the lack of moisture, the ground is very hard in many parts of the state. As a result, it will be very difficult for Method C, Crimping to be utilized for the placement of mulch. If a contractor is unable to demonstrate they can impress the mulch a minimum of 1-½ inch deep, they should utilize Method A, Netting or Method B, Tackifier. No pay adjustments will be made if the contractor must select one of these two alternative methods.
- 4) All open areas with exposed subsoils (i.e. not topsoiled yet) should use a dust control product intended for slopes, not for driving surfaces, to stabilize the area. Options include:
 - a) Limiting the area of exposure Spec Book 107.20 (4) & (6) give the engineer full authority to limit the erosive area exposed and to suspend or limit grading operations pending adequate performance of permanent erosion control measures.
 - b) Chemicals used for dust control on the slope; Dust Stop by Cypher International; HF5000 Tack by Innovative Turf solutions; or equivalent.
 - c) Other project specific or inventive methodology agreed on by the project leader, DOT project manager, regional stormwater engineer or erosion control specialist, DNR liaison, and contractor(s). Appropriate items will be added via contract change order.
- 5) If you have sod or plantings on the job, a commitment to watering is necessary. Proper care of plant material is the responsibility of the contractor. Given current conditions, the engineer may want to recommend watering of trees and shrubs every 5 days [more often if needed], rather than the normal 10 to 14 day period. See Standard Specification 632.2.19 landscape Planting Surveillance and Care, 632.2.19.1 General, paragraph (2) last sentence for increases in watering of plantings. "The engineer may order additional watering at any time during the plant establishment period if conditions require." . Additionally, a minimum of 15-30 days of additional watering may be prudent. Contractors are

responsible for replacing plant materials that do not conform to the minimum requirements as defined in 632.3.20; failure to provide adequate water does not relieve them of this requirement. No additional payment for water will be made for the care of plant material.

For Sod, the contractor must provide adequate water to achieve sod rooting to the earth bed. After this sod rooting has been achieved, additional water may be necessary to ensure continued viability of the sod. If additional water is needed after sod rooting, a change order will be written to pay for this water.

- 6) The ECIP should be amended to reflect changes made.
- 7) Central Office and regional Stormwater & Erosion Control Engineers and Specialists are available for questions, concerns or special circumstances.
- 8) These areas will be monitored, and if drought conditions continue, more or different BMPs may need to be applied. The above conditions will be lifted when the drought emergency has ended.
- 9) Project Managers are advised not to close out projects until adequate permanent erosion control installations are established.

DATE: July 19, 2012 FILE REF: DOT Liaison Guidance

TO: Regional DOT Liaisons, DOT PDS, SWECs, REC's, Local Road Managers, County Highway Commissioners

FROM: Dave Siebert – DNR

SUBJECT: Guidance for handling DOT project water withdrawals and seeding during a drought emergency

On July 19, 2012, Governor Walker extended the drought emergency to include all 72 counties in the state. The hot weather and drought conditions are making seed germination difficult and likely quadrupling the amount of water used for both dust suppression and seed/sod watering. In response to the drought, we are implementing a plan to ensure public waterways are not unduly impacted via water withdrawal. The plan has been endorsed by DOT, is consistent with the 2009 approach, and requires DOT (or assigns) to obtain DNR concurrence before taking water from any waterway in the state.

NOTE: this guidance ONLY applies during the Governor declared drought emergency. The need to obtain concurrence from the DNR ends when the Governor discontinues the drought emergency.

Guidance for Water Withdrawals on DOT Projects

DNR EA staff (DOT Liaison) will handle the DOT project water withdrawal issue through the liaison process. In drought-emergency areas, DOT may not approve withdrawal of surface waters without first obtaining concurrence from their respective DOT Liaison, regardless from where the water is taken. The DOT Liaison will coordinate internally with Water Management, Floodplain and Fisheries staff to determine if the proposed withdrawal would be protective of water resources.

DOT should alert its project leaders to be aware of the drought emergency and to coordinate water withdrawal proposals with DOT Liaisons. Also, DOT Liaisons should reinforce this required DOT-DNR coordination at preconstruction meetings or at regular project meetings, alerting both DOT project leaders and contractors.

The protocol for DOT Liaison approval can be as simple as a phone call or e-mail between the REC (or appointee) and the DOT Liaison. If the DOT Liaison is familiar with the waterway, the answer can be automatic. We are asking all DOT Liaisons to process these requests immediately so as to not affect the project schedule and ensure our low flow waterways are not impacted.

Unacceptable Withdrawals

If the proposal is determined to be unacceptable, the contractor must find alternative sources of water to be considered for approval by DOT. Withdrawals should not be approved by DOT in the following situations during a drought emergency:

- From trout streams
- From smaller warm water streams when the result of taking the requested water would be damaging to aquatic resources

Acceptable Withdrawals

If the proposal is determined to be acceptable, DOT may approve the contractor's action provided the withdrawal plan is strictly adhered to by the contractor. Proposed withdrawals averaging less than 100,000 gallons per day in any 30-day period (i.e. less than 3 million gallons **total** in any 30-day period) may be considered by DOT. Also, water may only be obtained when a water course crosses a public highway. The following surface water sources may be acceptable during a drought emergency:

- Large rivers, provided there are no flow concerns
- Smaller warm water streams (if Fisheries and Water Management staff agree)

Please contact Mike Halsted if you have questions or concerns regarding this guidance. Mike can be reached at (608) 333-6453 or e-mailed at: michael.halsted@wisconsin.gov