



INDIANA DEPARTMENT OF TRANSPORTATION

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TO: District Deputy Commissioners
District Highway Maintenance Directors
District Technical Services Directors
District Permit Managers

FROM: Monica Hartke-Tarr
Statewide Permits Director

SUBJECT: AGRICULTURAL DRAGLINE USE OF CROSS STRUCTURES & DITCHES
ON STATE RIGHT-OF-WAY

PERMIT OPERATIONS MEMORANDUM 21-01

*Supersedes Permit Operations
Memorandum 20-02*

INTRODUCTION

Heavy farm trucks can do serious damage to roads and bridges. In an effort to reduce damage to Indiana's transportation infrastructure, the agricultural industry has requested to transport animal waste fertilizer through temporary pipelines (known as "draglines"). INDOT structures are proposed to be used by private farm operations to distribute this raw fertilizer (liquified manure) through hoses or small pipes installed within drain structures. The hoses or pipes can deliver fertilizer to properties on the other side of the roadway. Hoses or pipes may also run along roadways within state-owned or -controlled right-of-way ("state right-of-way").

This memorandum clarifies the Department's position on distribution lines for fertilizer along state right-of-way and within INDOT structures. It establishes permitting requirements for all future use of state right-of-way and structures for these purposes.

BACKGROUND

Manure is collected on certain farm properties and can serve to fertilize fields on other properties that may be miles away. According to sources in Indiana's agricultural industry, dragline or direct-flow fertilizer application systems serve as a more efficient and economical alternative compared to delivering fertilizer by truck, which presents other risks and puts more vehicle use on rural roadways and highways.

These temporary transfer lines run in or along a road ditch or crossing under roadways through drain structures such as culverts. Typically, these operations are installed on a short-term basis of a few days, as warranted by conditions such as weather.

The Department recognizes the burdens on farming operations, and the necessity to effectively distribute fertilizer. This policy's intent is to allow for permissible means to consent to this practice, allowing efficiency of farming operations while also assuring safety to the public and the integrity of the State's roadway network.

DESCRIPTION OF THE DRAGLINING PROCESS

Draglining is a method of fertilizer application that creates a direct link between the livestock area where manure is collected in liquified form, and crops in need of fertilization. After traveling to the destination field, land application equipment injects the fertilizer below the soil's surface. A series of pumps makes this possible. One pump at the livestock site and a series of booster pumps along the line maintain sufficient pressure for the land application equipment to function properly.

Hoses have a mesh cloth material impregnated into the construction, generally rated at 200 PSI with a 600 PSI burst pressure. An outside covering coats the mesh. Visual inspection of the hose for wear to the coating must be done prior to use, to determine if the hose needs replacement.

The system is monitored by the operator for drops in pressure while in use. Pressure monitoring ensures that issues are detected immediately, so the system can be shut down and any hose issue or other equipment malfunction can be repaired.

Draglining technology allows land application of fertilizer up to two miles from the manure source, maintaining a direct connection. Pumps with a booster can deliver fertilizer up to seven or eight miles from the manure source.

USE OF RIGHT-OF-WAY

Pursuant to IC 8-23-2-5.5, IC 8-23-6-6, and 105 IAC Art. 7, INDOT's Permits Division is authorized to establish permit requirements and restrictions for all use and work performed in state right-of-way.

As such, for any future dragline systems on state right-of-way, users must obtain permission from INDOT to conduct these activities, by means of a permit. A permit application will also require a bond to cover all potential impacts to INDOT property. Approved permits will be issued for a one-year period and may be renewed annually.

PERMIT APPLICATION FOR USE OF STATE RIGHT-OF-WAY OR DRAIN STRUCTURES:

The following steps outline how a dragline operator may apply for this type of permit using INDOT's [Electronic Permit System](#) (EPS):

1. If a new EPS account is needed, register for a new account on the login screen.
2. After logging in, create a new permit.
3. Select permit type "Miscellaneous" and subtype "Ag Dragline."
4. Complete the required information.

5. Pay the \$15 permit fee, which may be paid as a one-time credit card charge or as an [IN.gov subscriber](#).
6. Obtain, complete, and upload bond documentation, which may be a performance bond in the amount of \$50,000 (covering single instances of use of state right-of-way, for an unlimited number of instances during the term of the permit), or a blanket bond in an amount sufficient to cover multiple concurrent dragline activities and can be extended in perpetuity.
7. Upload the following supporting documentation:
 - A document that provides the diameter size of the dragline, distribution hose, or pipe (not to exceed 10 inches in outside diameter).
 - Documentation indicating the diameter size of the culvert or drain structure, not to be less than 18 inches in rise (inside vertical dimension).
 - Documentation identifying both the manure source location and the destination field(s).
 - Detailed map: An aerial photo (which may use internet sources such as Google Earth) or map (may be hand-drawn) that identifies the following:
 - Location of manure source and destination field(s)
 - All state right-of-way to be used
 - All state drain structures to be used
 - Parallel and crossing points: Where the dragline will be placed in the right-of-way and where it will cross the road
 - Location of distribution hose
 - Maintenance of Traffic (MOT) documentation, documenting how traffic will be safely accommodated while work and equipment occupies right-of-way during set-up and removal.
 - Permit(s) as submitted to, and approved by, the Indiana Department of Environmental Management (IDEM).
 - Emergency spill plan as submitted to, and approved by, IDEM.

ADDITIONAL PERMITTING REQUIREMENTS

- An INDOT permit is also contingent upon all other necessary permits or compliance with regulations (e.g., environmental, local, etc.), including permitting requirements of IDEM.
- Hoses must be removed from drainage features for any rain event, in order to ensure the hydraulic capacity of state right-of-way.
- Delivery pipe or hoses must be in good operating condition with no leaks or loose connections that would cause spillage. Prior to application, the hose or pipe must be fully connected beyond the limits of state right-of-way.

- **Preliminary and post-application inspections:** At certain points, an inspection may be required, done by INDOT Asset Management or an INDOT Permit Inspector.
 - A preliminary inspection must occur if no documented inspection has been conducted in the past two years by Asset Management, or if the inspection videos/photos provided by the permittee indicate questionable conditions. If required, the preliminary inspection must occur within 15 days before the anticipated use.
 - A post-application inspection is required before the release of the permit and bond.
- **Notice to INDOT of fertilizer application:** The permittee shall notify INDOT at least 24 hours' notice before a dragline application, to allow for a preliminary inspection by INDOT staff if warranted. Notification must be done in writing, either by EPS message or email to the respective Permit Investigator. Failure to provide timely notice to INDOT may result in revocation of the permit.
- **Application window:** Once notice of fertilizer application is given, the permittee shall be provided a four-day window for application. Although INDOT will make its best efforts to accommodate permitted dragline application use of right-of-way, INDOT reserves the right to request removal of the dragline for any reason, including maintenance, emergency work on right-of-way, weather events, or other instances that could threaten the hydraulic capacity of state right-of-way.
- **Notification of completion of work:** The permittee shall notify INDOT within 24 hours of completion and removal of each dragline application, to allow any inspection by INDOT staff as warranted. Failure to provide timely notice to INDOT may result in revocation of the permit.
- **Documentation of condition of drainage feature and right-of-way before and after use:** Inspection photos or video, which contain a date stamp to record the date the photos or video were taken, must be provided before dragline is set up on state right-of-way and after the dragline is removed. The photos and video should show the condition of the structure, the surface conditions of ditches, and ingress and egress of the drainage structures. The permittee shall upload the photos or video to EPS.
- Dragline travel through drain structures is not permitted under interstates. No excavation or alteration of any kind is permitted on interstate right-of-way.
- No dragline splices or joints are permitted within the culvert or pipe.
- No INDOT fencing must be cut, removed, or damaged unless the fence is repaired or replaced within 24 hours after removal of the dragline.
- No work can be performed which will improperly interfere with traffic. Unloading equipment on the roadway or roadway shoulders is not permitted unless performed with appropriate traffic control.
- Parking vehicles or equipment on the roadway or roadway shoulders is prohibited.
- Driving onto the mainline roadway from the ditch, or driving on the shoulders where damage will occur, is also prohibited.

- If the roadway or roadway shoulders are damaged as a result of these operations, they must be repaired immediately or within a reasonable timeframe as determined by INDOT.
- All repairs by the permittee must be made with suitable and approved materials; replacement must conform to existing grades. Any and all repairs or restoration work, including restoration of damage to soil, must be completed in accordance with INDOT Standards and Specifications.
- Right-of-way, including all drain structures and soil, must be restored to original condition as it existed prior to the permitted work (attempts to reestablish vegetation can be inspected at the conclusion of the permit's term).
- INDOT reserves the right to require the immediate suspension of pumping operations and removal of the dragline if conditions warrant.
- Crossings must be as close as practical to perpendicular to the roadway corridor.
- Hoses may not run longitudinally on right-of-way (along ditches in INDOT right-of-way or perpendicular to the road on INDOT right-of-way).
- Where the dragline crosses the right-of-way, retro-reflective drums (or an equivalent) must be placed at intervals adjacent to the dragline to warn INDOT Maintenance, INDOT contractors, and other off-road traffic of the presence of the crossing. The drums should be placed along the dragline on each side of the right-of-way so that a riding mower could not easily pass through.
- For INDOT structures that are part of a County's legal drain system, the County Drainage Board must approve of the temporary reduction in capacity of the legal drain prior to any work activity commencing.
- To properly control traffic during set-up and removal, the Indiana Manual on Uniform Traffic Devices (IMUTCD) must be followed. *NOTE: Signs must be professional and cannot be handwritten or painted (permittees should consult the local municipality or sign rental companies). It is recommended that the permittee utilize flaggers where draglines enter and exit the right-of-way.*
- In the event of a spill or leak affecting state right-of-way, the permittee is required to immediately contact the INDOT District office that approved the permit.
- The permittee, and all contractors, must expressly accept all responsibility for all negative consequences for any failure of equipment or processes.

RENEWAL

Renewal of the permit beyond its one-year term may be accomplished by a request made in EPS and payment of a new application fee (and if necessary, establishing a new performance bond).

SUMMARY

Those who plan to use INDOT property for a dragline fertilizer application system should plan ahead to obtain permission from INDOT and all other involved entities such as local governments. This memorandum shows how the Department stands ready to support the state's agricultural industry with a process that also ensures safety and protects public assets.

INDOT Customer Service Toll Free Line 855-INDOT4U (463-6848)

https://www.in.gov/indot/files/District_Permits_Map.pdf