

2018-19 Dirt and Gravel Road Assessments

An assessment involves inspecting unpaved roads in the field to determine locations where road runoff affects stream quality, and identifying those segments as “potential worksites”. These worksites can be evaluated using 12 criteria in an attempt to determine the overall “pollution potential” for the site. The entire length of unpaved road where road drainage is contributing to stream pollution should be made into a worksite.

Question and Answer

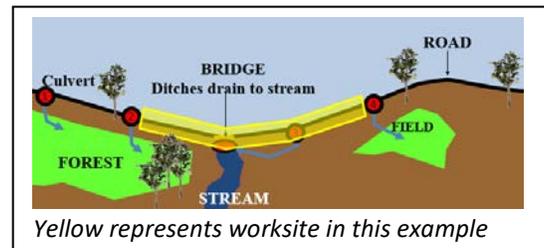
GENERAL QUESTIONS

Will there be an assessment for paved low volume roads?

While we have had some discussions, none are currently planned. The large volume of LVR roads to assess, combined with the lack of traffic counts for the vast majority of these roads, and the fact that traffic counts are only good for 5 years, makes the logistics of a paved low volume road assessment very difficult. The workgroup will continue to discuss this issue.

How do I decide if it is a worksite, and where to start/stop it?

Does it impact a stream? This determination will always be subjective, but is the major focus of the field-based assessment trainings. The length of unpaved road currently draining to a stream should be used in determining worksite boundaries. Sections of unpaved road that do not impact waters should not be part of a worksite (regardless of the road condition). Assessments should be based on current conditions, not “what if we get a 500 year storm and all these culverts plug.”



Why is there another dirt and gravel road assessment?

The last “focused effort” to assess unpaved roads was in 2007. Since then, many new CD staff have begun working with the Program and the funding increase has changed the type of projects the Program funds. Many CD staff have indicated that previous assessments are incomplete or inadequate. The opening of a new assessment has been spurred largely by conservation district requests.

Is this dirt and gravel assessment mandatory?

No. The assessment is voluntary. **Existing potential worksites will be retained.** Counties are free to update and improve upon the original assessments. Any district choosing not to do a new assessment will still have the same sites they have today.

Who does the assessment?

County Conservation District personnel, or their designee, are responsible for conducting the assessment in each County. It is acceptable to use volunteers, interns, or other such people to conduct an assessment. The person(s) conducting the assessment should attend an assessment training.

When is the dirt and gravel assessment due?

There is currently no “due date” to complete assessments. Counties are always free to update their inventory of potential sites. It has yet to be determined when and how these newly identified sites may be added to the allocation formula that will impact conservation district allocations.

Will my district’s Dirt and Gravel allocation change as a result of this assessment?

Likely eventually. The “miles of potential worksites” are a major factor in the allocation formula that distributes funding to conservation districts. The Program’s “policy and planning” workgroup will evaluate potential allocation impacts and make recommendations to the State Conservation Commission (SCC) regarding the timing of allocation impacts, and any phasing in or formula changes if necessary. The SCC makes final determinations regarding allocations.

ASSESSMENT PLANNING AND LOGISTICS

How long does it take to do an assessment?

As a general guide based on previous assessments, it should be possible to evaluate **approximately 5 miles of unpaved road per hour** once you are comfortable with the procedure (excluding travel time to the region). This is highly variable based on the distance between unpaved roads, the assessment mechanism (paper vs computer), the number of people participating, level of detail recorded, and other issues.

Can one person do an assessment alone?

Yes, it is possible to complete site assessments alone. It is much more efficient (and safe) however, with two people: one to drive, and the other to navigate and perform the assessment. It also facilitates discussion about potential sites and rankings.

Can I use D&G funds to pay for assessment costs?

Yes. Districts can currently use up to 10% of their allocation for administration and 10% for education. Either of these funding categories can be used to pay for the costs of completing an assessment (staff time, travel costs, equipment, etc.)

What is the best time of year to do an assessment?

It is easier to do assessments from October to May when the majority of the leaves are off the trees and shrubs. This makes it much easier to see potential impacts that may be hidden in the summer. Minor snow cover (3” or less) should not impede assessments as long as you have 4WD. Rainy days are excellent not only for finding worksites, but for taking pictures and developing a better understanding of road drainage impacts.

Should I try to enter sites into the GIS in the field or use paper maps?

GIS in the field: Entering sites directly into the GIS system from the field may save you time, but remember the GIS system is entirely online, so requires an internet connection to work.

Cell service: Cellular coverage will be a determining factor here. Service can be connected directly to a capable tablet, through a cell card in a laptop, or through a wireless hotspot using a cell phone.

Satellite internet: Satellite based internet will allow internet connectivity in the field throughout your county. While expensive, satellite internet may be a viable option for short term periods of intensive assessment work.

Offline tool: The Center is currently working on an “offline assessment tool”. This tool would work in Google Chrome on a cell phone, tablet, or laptop, and would store the endpoints of worksites and basic data such as the road name and assessment info. This data can be uploaded into the GIS at a later time to allow worksite creation. Webinars will be held when this functionality is complete.

Tablet vs laptop: Either device can be used as long as Google Chrome is installed. Tablets typically have GPS capability built-in, and 4G tablets can be put on a cellular plan. GPS functionality can be added to laptops through inexpensive USB add-ons.

Assessments on Paper: While likely more time consuming since data needs to be entered into the GIS at a later time, completing assessments on paper resolves a host of logistical issues related to internet service in the field, and also provides a failsafe backup for the digital data. Topo maps with existing worksites can be printed directly from the DGLVR GIS system to be taken into the field.

What other equipment may help me to complete an assessment?

Digital Maps:

Smartphone: Google or Apple maps are great where you have service. Several free mapping apps are available for download that will let you store maps on the phone for offline use as well.

GPS: Standalone GPS units are invaluable in areas where cell coverage is sparse. It also frees up cell phone for pictures, calls, and other uses.

Paper Maps:

Printed from GIS: Maps with existing potential worksites are invaluable in the field. They can be printed with a variety of backdrops including topographic maps and aerial photos.

PennDOT Type 10 maps: These maps are count-specific and include road names and/or numbers for all public roads including municipal roads. They are useful in determining road names, in determining which roads are public vs private, and for tracking overall assessment progress. Link:

<https://www.penndot.gov/ProjectAndPrograms/Planning/Maps/Pages/County-Type-10.aspx>

Gazetteer and other commercial maps: Gazetteers or other such detailed maps are also useful.

Miscellaneous:

Power inverter: Useful for powering laptops and charging other devices.

Camera: Phone cameras are typically adequate, but photo-documentation is recommended.

Clothing: Insect repellent clothing and waterproof footwear are recommended since you may have to venture off the roadway to determine potential stream impacts of outlets.

Distance Measuring Instrument (DMI): DMIs are digital instruments for your vehicle that accurately measure distance while driving. They can either be hardwired into the vehicle's speedometer, or solely GPS based. They provide significant improvements over using the vehicle's odometer, and can also be used in place of a measuring wheel when stationing long projects.

What else should I be noting or looking for during an assessment?

Stream Crossings: Stream crossings are not specifically addressed in the unpaved road assessment. This is because the assessment criteria dates back to before stream crossings became an important emphasis in the Program. Be sure to note any stream crossings that may be good candidates for replacement if your district prioritizes those types of projects.

LVR Potential Projects: While there is not official inventory of potential paved LVR projects, you should note any LVR sites that would be good candidates for future projects to discuss them with the owning municipality.

Should I invite the road owner, usually the township, out with me when I assess their roads?

This is a local decision. While it is a great opportunity to build relationships and educate them about the Program and the types of project you are looking for, it may also add significant time to the process.

MAKING POTENTIAL WORKSITES

What if I find a new potential worksite not in the current inventory?

The worksite should be added based on the length of road impacting the stream.

What if a potential worksite already exists in the current GIS system, but it is too short or in the wrong spot?

Delete the existing site, and create a new worksite based on the length of road impacting the stream. Since there is no financial data for the "potential" worksites, you can safely delete and recreate them. The only data that would be "lost" in doing this is old assessment ratings, which are likely over a decade old anyway.

What if multiple potential worksites already exist on a road in the current GIS system, can they be combined?

Yes, delete the sites, and create a new worksite based on the length of road impacting the stream. Since there is no financial data for the "potential" worksites, you can safely delete and recreate them. The only data that

would be “lost” in doing this is old assessment ratings, which are likely over a decade old anyway. Remember that a long “potential worksite” can be made into several “funded worksites” in the future based on site conditions, available funding, grant application, etc.

Should “funded sites” that have been completed be reassessed?

They can. Many worksites that have been completed will still impact water quality due to their close proximity to streams. Many previously funded sites are over a decade old and may be in need of an additional project. Note in the GIS that the “potential worksites” layer and the “funded sites” layer are independent of each other.

Do I need to fill out the “dirty dozen” criteria for each site?

That is a local decision. It is not required to complete these ranking criteria to make a worksite. The identification of worksite locations is the major purpose of this assessment. Many counties use the “dirty dozen” ranking criteria as part of their application ranking process however. The completion of the “dirty dozen” makes comparing road conditions between sites easier and give some useful basic information about the worksites.

How do I decide whether to make one long worksite or several smaller ones?

The answer to this question depends on your “local answer” to the question above.

Counties completing the “dirty dozen”:

A long worksite means that site conditions must be averaged during the assessment. Creating two or three smaller worksites instead of one large worksite may allow you to more accurately evaluate each site. When site conditions change considerably, consider creating separate worksites.

Counties NOT completing the “dirty dozen”:

If you are not evaluating the conditions of each worksite, there is no reason to make multiple consecutive worksites that have common endpoints (end-to-end worksites). Sites can be made longer instead of making several smaller sites. Remember that the length of a potential worksite has no bearing on the eventual “funded project”. Also remember that a long “potential worksite” can be made into several “funded worksites” in the future based on site conditions, available funding, grant application, etc.

How accurate do I need to be in worksite creation?

If you can get starting and ending points for worksites to within 100-200’ of the exact position, that should be close enough. Likewise, worksite lengths in the GIS should be within 200-300’ of measured worksite lengths.

What if I find an unpaved road that is mistakenly marked as paved in the GIS?

The road should be marked as unpaved, then potential worksites can be created if needed.

What if I find a paved road that is mistakenly marked as unpaved paved in the GIS, or may have been paved since the previous assessment?

The road should be marked as paved. Any existing potential sites on this paved road must be deleted. This will have no impact on any “funded sites” that may be on this road (never delete “funded sites”, even if they are paved, to preserve past financial data).

What if a road is partially paved and partially unpaved?

All road segments in the GIS system go from intersection to intersection, and must be either paved or unpaved. Roads cannot be split. This allows us to update the base roads layer from outside sources as they become available. Roads must be marked as “unpaved” before potential worksites can be made. If the majority of the road is actually paved, the status should be changed to “paved” after the potential site is created. While this may result in an unpaved worksites on a paved road, it is the most accurate way to address this situation. The road should left as the surface status that reflects the majority conditions

(paved/unpaved). One common scenario is when a road is “tar and chipped” or paved just in front of residences to keep the dust down. In most of these cases, these can be seen as temporary dust abatement practices, and the entire road can be considered unpaved. Use common sense to call the road paved or unpaved based on the predominant surface type.

Should roads in specific watersheds (HQ, EV, impaired, etc.) or by special stream designations (wild trout, warm water fishery, etc.) be assessed differently?

No. Sites should all be assessed the same way. Considerations or weighting for the watershed or stream designations may be part of the QAB’s site evaluation when they are determining which sites to recommend for funding.

What about wetland or lake impacts?

Wetlands and lakes are part of the “waters of the Commonwealth”, and roads that impact them should be assessed just like roads that impact streams.

What about ephemeral streams or dry channels?

Ephemeral and dry channels should be assessed just like streams. Any material that is deposited in a dry channel will eventually be washed downstream into larger channels.

Can potential worksites cross township lines?

Yes. If the potential site is funded in the future, then separate “funded sites” will need to be made for each township, but the “potential worksite” can span the municipal line.

Can I make potential dirt and gravel worksites “non-municipal” public roads?

State Forest / State Park roads: NO, their DGLVR funding is separate

Private roads: NO, not eligible for DGLVR funding

Federal roads: NO, not eligible for DGLVR funding

County, Game Commission, Fish Commission, PennDOT: Yes, these entities are also eligible for DGLVR funding, so CDs can assess these roads at their discretion (if they are open to public vehicle travel for at least 2 consecutive weeks a year)

In addition, any potential sites located on one of these roads must be deleted.