

Warren County Dirt, Gravel, and Low Volume Road Program Policies

May 20, 2025

This Packet contains the following policies:

- Equal Access to Funding Policy
- Conflict of interest Policy
- Non-Pollution Standards Policy
- QAB Rules of Contact Policy
- Training Incentives for Road Managers and Equipment Operators Policy
- Stream Crossing Structural Replacement Policy
- Stream Crossing Ranking Criteria Policy
- Driving Surface Aggregate (DSA Guidelines) Policy
- Project Ranking Criteria Policy
- Funding Criteria Policy
- Traffic Count Policy
- Low Volume Road Policy
- Excerpt from Dirt, Gravel, and Low Volume Road Administrative Manual, Chapter 7: Additional Program Policies, 7.1 Stream Crossing Structural Replacement Policy
- Warren County QAB Stream Crossing Priority Rating Worksheet
- Excerpt from Dirt, Gravel, and Low Volume Road Administrative Manual, Chapter 7: Additional Program Policies, 7.2 Driving Surface Aggregate (DSA)
- Warren County QAB Priority Rating Worksheet
- Dirt, Gravel, and Low Volume Road Maintenance Program Traffic Count Policy SCC approved 9/9/2014

For additional information please contact the Conservation District.

Warren County Conservation District

4000 Conewango Avenue

Warren, PA 16365

(814) 726-1441

www.wcconservation.net

Katie Stover, District Manager

kstover@wcconservation.net

Warren County Dirt, Gravel and Low Volume Road Program Policies

This policy replaces the Statement of Policy adopted by the Warren County Conservation District Board of Directors on 4/20/99 and 11/16/2004.

Equal Access to Funding: The following Equal Access to Funding statement was adopted by the QAB at its meeting on Friday, December 12, 2014, and by the Warren County Conservation District Board of Directors at its meeting on January 20, 2015: All county citizens, through their municipal representatives, shall have equal access to the funding provided through the Warren County Dirt, Gravel and Low Volume Road program. Decisions of funding allocation will be made on the basis of maximizing the reduction of pollution to county streams in a cost effective manner, and targeting the most ecologically sensitive streams first. No discrimination will be made concerning race, religion, gender, economic status or political standing of citizens affected by the improvements achieved through this program. All municipalities are eligible to submit project proposals which will be judged solely by a published set of criteria approved at a public meeting of the QAB. The QAB will be bound by the policies established by the State Conservation Commission for the administration of this program statewide.

Conflict of Interest: The following Conflict of Interest Policy Statement was adopted by the QAB at its meeting on December 12, 2014, and by the Warren County Conservation District Board of Directors at its meeting on January 20, 2015: No District Director, Quality Assurance Board member, or District Employee, shall, as a result of this program, be permitted to obtain financial benefits for himself, a member of his immediate family, or a business with which he is associated. This shall preclude the payment of normal salary and benefits to employees provided in their normal course of employment.

In addition, any QAB member, Conservation District Board Member, or staff member, will be excluded from voting on actions that might benefit a road or stream adjacent to his or her property or the property of relatives or businesses in which he or she has an interest. In the event of such a conflict, the QAB Chairman will vote in his or her stead (or simply be barred from voting, as determined at the meeting).

Non-Pollution Standards: The following Non-Pollution Standards Policy was adopted by the QAB at its meeting on December 12, 2014, and by the Warren County Conservation District Board of Directors at its meeting on January 20, 2015: The Warren County Conservation District DGR Program will not fund the use of any materials that are not approved by the Center for Dirt and Gravel Roads nor any practices that may be harmful to the environment. The use of any unapproved materials or practices used on a trial basis must be approved by the Center for Dirt and Gravel Roads prior to use.

QAB Rules of Conduct: The following QAB Rule of Conduct Policy was adopted by the QAB at its meeting on December 12, 2014, and by the Warren County Conservation District Board of Directors at its meeting on January 20, 2015: The meetings of the QAB will be conducted according to Roberts Rules of Order. The meeting dates of the QAB will be announced annually in a public announcement made by the Warren County Conservation District. Scheduled meetings may be canceled at the

discretion of the QAB. The QAB will consist of one representative from the Fish and Boat Commission, NRCS, the Warren County Conservation District, and a non-voting Chairman appointed by the Warren County Conservation District. Minutes of the QAB meeting will be available to the public. All recommendations of the QAB must be presented to the District Board for final approval.

Training Incentives for Road Managers and Equipment Operators: The following Training Incentives for Road Managers and Equipment Operators Policy Statement was adopted by the QAB at its meeting on December 12, 2014, and by the Warren County Conservation District Board of Directors at its meeting on January 20, 2015: The QAB may authorize an incentive payment for expenses incurred by road managers or equipment operators attending ESM Training or other DGR training events. Payment will be made upon receipt of invoices documenting expenses and proof of attendance at the event. Priority will be given to townships who currently do not have trained personnel.

Stream Crossing Structural Replacement Policy: The attached Stream Crossing Structural Replacement Policy was adopted by the QAB at its meeting on May 9, 2025 and by the Warren County Conservation District Board of Directors at its meeting on May 20, 2025.

Stream Crossing Ranking Criteria: At its meeting on May 9, 2025 the QAB drafted criteria to prioritize funding stream crossing replacements based on suggestions of the State Conservation Commission and the Center for Dirt and Gravel Roads. These criteria were then approved by the Warren County Conservation District at their meeting on May 20, 2025. The Criteria will be reviewed and amended annually. (Written Criteria attached as a separate sheet.)

Driving Surface Aggregate (DSA) Guidelines: At its meeting on November 17, 2017 the QAB adopted as policy the DSA guidelines set forth in the current Administrative Manual (see attached). These guidelines were then approved by the Warren County Conservation District at their meeting on November 21, 2017.

Project Ranking Criteria: At its meeting on November 17, 2017 the QAB drafted criteria to prioritize funding proposals based on suggestions of the State Conservation Commission and the Center for Dirt and Gravel Roads. These criteria were then approved by the Warren County Conservation District at their meeting on November 21, 2017. The Criteria will be reviewed and amended annually. (Written Criteria attached as a separate sheet.)

Funding Criteria Policy: The following Funding Criteria Policy was adopted by the QAB at its meeting on May 9, 2025, and by the Warren County Conservation District Board of Directors at its meeting on May 20, 2025: The District will fund up to one stream crossing project per year. Stream crossing applications will compete against other stream crossing applications, while drainage projects will compete against other drainage projects.

Traffic Count Policy: The attached Traffic Count Policy was adopted by the QAB at its meeting on February 13, 2015, and by the Warren County Conservation District Board of Directors at its meeting on February 17, 2015.

Low Volume Road Policy: The following Low Volume Road Policy was adopted by the QAB at its meeting on February 13, 2015, and by the Warren County Conservation District Board of Directors at its meeting on February 17, 2015: Due to high paving costs Low Volume Road projects will address Drainage and Base first. Repaving the surface is not guaranteed for funding.

Stream Crossing Replacement Policy (Excerpt from 7.1 of DGLVR Administrative Manual)

7.1 Stream Crossing Structural Replacements

This section applies to stream crossing replacements (not road drainage "cross pipes") funded by the Dirt, Gravel, and Low-Volume Road (DGLVR) Program on both Low-Volume and Dirt and Gravel roads. Refer to Chapter 1 of the *DGLVR Stream Crossing Replacement Technical Manual* for additional discussion of the background, purpose, and intended benefits of the policies detailed here.

7.1.1 Background

Replacement Structures: One of the DGLVR Program's major goals of stream crossing replacements is to ensure that structures that are funded by the DGLVR Program are designed and implemented properly to achieve stream continuity through the roadway. Stream continuity refers to the connectivity and continuation of typical streambed features (profile, slope, width, composition, grade controls, pools) along its length upstream, downstream, and through a road crossing structure. DGLVR projects often reconnect segments of stream that have been disconnected and vertically offset by an undersized road crossing. New structures funded by the DGLVR Program must be wide enough to allow for construction of a functional stream channel through the crossing. This includes bank margins, low flow channel, grade controls, and other stream features. Construction of a bankfull-width stream channel through wider-than-bankfull-width structures will not only accommodate the hydraulic capacity of the stream but will also allow for better stream function through the road regarding flood resiliency, sediment and debris transport, and aquatic organism passage.

Existing Structure Eligibility for Replacement: Another major goal of the DGLVR stream crossing replacements is to limit paying for replacement of stream crossing structures to locations that are negatively impacting streams and the aquatic environment. The best overall approximation of environmental impact from a crossing is the width of the existing structure opening related to the bankfull width of the channel. A channel's bankfull width is the width of flow at a "dominant channel forming flow stage" where sediment and bed material is moved most effectively through the stream system, typically associated with a one-to-two-year recurrence interval for Pennsylvania. Stream crossing structures that are significantly less than the channel's bankfull width are typically associated with many problems, including gravel deposition upstream of the road, excessive stream scour and erosion downstream of the road, flooding, and washouts. DGLVR site eligibility policy (detailed in section 7.1.2.2) limits paying for structural replacement on existing pipes over 4' in diameter to only those locations where the existing structure is less than 75 percent of the bankfull channel width. These structures are most likely to be causing negative stream impacts and are most likely to be sources of perpetual maintenance and road impacts to road owners (gravel bar removal, erosion, etc.).

7.1.2 DGLVR Stream Crossing Replacement Policy

This section details the DGLVR Stream Crossing replacement policy for eligibility, new structures, and additional responsibilities of the conservation district.

7.1.2.1 Policy for Structure Installation

All stream crossing replacements funded in whole or in part with DGLVR funds, or listed as in-kind on a DGLVR Project, must follow the DGLVR Stream Crossing Design & Installation Standard, unless an “Exemption from DGLVR Stream Crossing Standard” (see section 7.1.3) is applicable. The Standard and its attachments are available online at <https://www.dirtandgravel.psu.edu/> For projects receiving an Exemption from DGLVR Stream Crossing Standard, other site-specific requirements apply (see section 7.1.3).

7.1.2.2 Policy for Stream Crossing Eligibility for Replacement

Eligibility criteria for replacing stream crossings, in whole or in part, with DGLVR funds:

- **Small Pipes:** Existing stream crossing structures with an opening width less than or equal to 48" are automatically eligible for replacement regardless of their relationship to the bankfull channel width, as long as they are replaced according to DGLVR Policy.
- **Multiple Pipes:** Existing stream crossings consisting of multiple (side-by-side) pipes are automatically eligible for replacement regardless of their relationship to the bankfull channel width, as long as they are replaced according to DGLVR Policy. This automatic eligibility applies to multiple pipes only, not multi-cell or multi-opening bridges.
- **All Other Structures:** For existing single-opening structures with an opening width over 48", only structures with a “structure opening width to bankfull channel width” ratio of 75% or less are eligible for replacement with DGLVR Program funds.
- **SCC Notification:** Conservation districts are required to notify the State Conservation Commission (SCC) of proposed stream crossing replacements as soon as practical before a contract is signed. An online notification system is available by logging in to the Center for Dirt and Gravel Road Studies website (same log-in as accessing the GIS system) at www.dirtandgravelroads.org.

Note: When measuring the width of an existing structure, measure the most limiting width (for example: the narrowest pipe in a series of “necked-down” pipes, or the narrowest point perpendicular to the flow between abutments of a skewed bridge).

7.1.2.3 Where the DGLVR Stream Crossing Policy Applies

All stream crossing replacements funded in whole or in part with DGLVR funds, or listed as in-kind on a DGLVR Project, must follow the DGLVR Stream Crossing Design & Installation Standard, unless an “Exemption from DGLVR Stream Crossing Standard” (see section 7.1.3) is applicable. The Standard and its attachments are available online at <https://www.dirtandgravel.psu.edu/>. For projects receiving an Exemption from DGLVR Stream Crossing Standard, other site-specific requirements apply (see section 7.1.3).

For DGLVR Program purposes, the stream crossing policy outlined here applies to situations where streams, including intermittent channels, with identified bed and banks are flowing into the road or the uphill ditch. See section 7.1.3 for more information on Automatic and SCC-requested exemptions from the DGLVR Stream Crossing Standard. Contact the State Conservation Commission in questionable circumstances.

Routine maintenance of stream crossing structures is not eligible for DGLVR funding. This applies both to stream crossing structures that are ineligible to be replaced with DGLVR funds or are eligible for replacement with DGLVR funds but are not being replaced. For these structures, no work may be performed directly on the stream crossing structure or its components

unless the structure is replaced according to DGLVR Program Policy. “Work” includes, but is not limited to, culvert lining, extending undersized stream crossings, bridge deck repairs, and adding or replacing headwalls and endwalls to an existing stream crossing structure. The policies and qualifications for replacement with DGLVR Program funds outlined here and in the DGLVR Stream Crossing Design & Installation Standard **do not exempt projects from any permitting or engineering requirements.**

7.1.2.4 Policy Limiting Engineering and Consulting Costs

As outlined in section 3.7.4.7, Program funds can be used to cover engineering, permitting, or similar consultant costs, but such costs are limited to a combined maximum of 20 percent of the total contract amount between the district and the grant recipient, not to exceed \$25,000. A Request for Proposals (RFP) is available on the Center for Dirt and Gravel Road Studies website. This document is highly recommended for use in hiring an engineer/consultant for stream crossing projects.

7.1.2.5 Conservation District Education Requirements

Education Requirements for Conservation Districts: Effective July 1, 2023, at least one conservation district staff member must have completed the DGLVR Program’s “Stream Crossing Replacement Certification Training” and received a certificate of completion before the QAB can recommend or the conservation district Board can approve a contract for a project involving a stream crossing replacement. A Stream Crossing Replacement Re-Certification Training must be taken once every three years to maintain staff certification. This training requirement does not apply to crossings that qualify for an automatic exemption from the DGLVR Stream Crossing Standard (see section 7.1.3.1).

7.1.2.6 Conservation District Requirements

- **Conservation Districts are required to hold meetings including:**
 - **Pre-application:** Meeting, typically held with grant applicant before application submittal.
 - **Pre-design:** If an engineer is required by permitting or DGLVR standard, then a pre-design meeting must be held. On-site meeting, typically held with grant applicant and project engineer, occurs after the grant applicant signs a contract with the conservation district for DGLVR funding and hires an engineer, and before design and permitting.
 - **Pre-construction:** On-site meeting, typically held with grant recipient, project engineer, and sub-contractor (if applicable), prior to starting construction.
- **Conservation Districts are required to attend a bid site showing (if held):** On-site meeting, typically held with the grant recipient, project engineer, and potential bidders/contractors, for structure installation before bids are due. These meetings are highly recommended but at the discretion of the grant recipient.
- A “Stream Crossing Eligibility Determination” (Appendix H) must be completed by the conservation district and kept in the project file for all stream crossing replacements, even those with an exemption from the DGLVR Stream Crossing Standard. This form requires measurement of the bankfull channel and existing structure to determine DGLVR Program eligibility.

- Stream crossing replacements nearly always extend outside the road right-of-way. Applicants are strongly encouraged to get verbal permission from landowners for off right-of-way work before contracting. Before working outside the right-of-way, the grant recipient must obtain written permission from the landowner. Landowner permission should be sought as early as possible in the funding process, ideally before contracting, to ensure the project can be implemented as planned. A sample landowner agreement is provided at www.dirtandgravelroads.org. Districts and grant recipients can use their own landowner agreements as long as they are in a form and manner similar to the sample provided. Districts must keep a copy of the signed landowner consent form with the project file for any work performed off the right of way. If landowner permission is required to achieve stream continuity and meet the DGLVR Stream Crossing Standard, but cannot be obtained, the project cannot be completed. Contact the SCC in questionable circumstances. This off-ROW policy is detailed in section 3.7.4.8 of the *DGLVR Administrative Manual*.
- A site assessment must be completed for each stream crossing prior to the QAB recommending the project for funding. This site assessment must be completed by the conservation district or their designee and must be used to support development of cost estimates and the grant application. A site assessment includes obtaining a longitudinal profile and a minimum of two cross-sections of the existing stream channel. The longitudinal profile and cross sections can be used by the conservation district to review future surveys and project plans to ensure they meet DGLVR Program policies and the DGLVR Stream Crossing Standard. The longitudinal profile and cross sections must be completed in accordance with section IV. K of the DGLVR Stream Crossing Design and Installation Standard. Additional details for completing longitudinal profiles and cross sections are available in Chapter 4 of the Stream Crossing Technical Manual and in the technical bulletins attached to the Stream Crossing Technical Manual. If, later in the design process, the design engineer completes their own site assessment to support their project design, the conservation district staff is required to be on-site while the site assessment is being performed by the engineer and/or surveyor. The conservation district's role during the engineer's site assessment is to observe and assist with the longitudinal profile and cross sections and ensure that all important data points are obtained. The site assessment requirement does not apply to sites that are eligible for an automatic Exemption from the DGLVR Stream Crossing Standard but does apply to sites that may later receive an Exemption from the DGLVR Stream Crossing Standard through the SCC (see section 7.1.3.2).
- If a project is required to be designed by an engineer, the grant recipient or engineer must provide all permit applications, Site Assessment, and design plans and specifications (per DGLVR stream crossing replacement standard) to the conservation district. The conservation district must review the documents and provide written confirmation to the grant recipient or engineer that these submitted documents comply with DGLVR policy and the Stream Crossing Standard before they are submitted (or resubmitted) for permit review. The purpose of this review is to verify consistency with DGLVR policies and the Stream Crossing Standard, not to review engineering calculations or permit completeness. "Consistency" and "deficiency" form letters for conservation district use can be found on the Center's website.

- If a project is required to be bid out for construction, the grant recipient or engineer must provide all draft bid packages to the conservation district. The conservation district must review the draft documents and provide written confirmation to the grant recipient or engineer that those draft bid documents comply with DGLVR policy and the Stream Crossing Standard before they are provided to potential bidders. The purpose of this review is to verify consistency with DGLVR policies and the Stream Crossing Standard, not to review engineering calculations or bidding requirements. It is up to the grant recipient to comply with applicable bidding requirements. “Consistency” and “deficiency” form letters for conservation district use can be found on the Center’s website.
- Conservation districts must be on-site regularly during construction to ensure that DGLVR Program policies and the Stream Crossing Standard are being met. At a minimum, the conservation district must be onsite during the installation of “Critical Stages of Construction” as defined in the DGLVR Stream Crossing Standard.
- In situations where no current stream crossing exists and a new crossing is to be installed, DGLVR Program policy must still be followed. The conservation district must contact the SCC for eligibility guidance. This requirement does not apply to sites that receive an exemption from the DGLVR Stream Crossing Standard (see section 7.1.3).
- Conservation districts must complete the “Project Lifecycle Checklist” (Appendix J) during the planning and implementation of stream crossing replacements, and the form must be kept in the project file. This requirement does not apply to sites that receive an exemption from the DGLVR Stream Crossing Standard (see section 7.1.3).

7.1.3 Exemptions from the DGLVR Stream Crossing Standard: Site-specific Exemptions to Following the Standard

The State Conservation Commission (SCC) recognizes that it is not always practical, cost effective, or biologically beneficial to complete a comprehensive stream continuity project in certain situations. Stream crossing replacements vary drastically around the state, and this section on exemptions from the DGLVR Stream Crossing Standard is designed to provide maximum leeway for the conservation district and SCC to adapt to unique situations. The exemptions from the DGLVR Stream Crossing Standard discussed in this section only exempt projects from DGLVR requirements and do not exempt projects from any applicable permit requirements from DEP or other entities.

7.1.3.1 Automatic Exemptions from the DGLVR Stream Crossing Standard

The following existing conditions may be, at the discretion of the conservation district, considered “Exempt from the DGLVR Stream Crossing Standard” without SCC approval for channels with a bankfull width of 4’ or less and:

- The defined bed and bank coming to the road does not extend more than 500’ upslope of the road ditch, or
- The drainage area of the bed and bank coming to the road is 20 acres or less.

Complete the “Automatic Exemption from the DGLVR Stream Crossing Standard” form (Appendix I) and keep it in the project file. Automatic exemptions still need to be reported in the SCC notification system.

7.1.3.2 SCC Approval for Exemptions from the DGLVR Stream Crossing Standard

Occasionally, circumstances may exist where a conservation district would like to request an exemption from the DGLVR Stream Crossing Standard from the SCC on a larger stream that does not qualify for an automatic exemption as outlined in 7.1.3.1. These situations must be handled individually, and a signed “SCC Exemption from the DGLVR Stream Crossing Standard” form must be obtained from the SCC and kept in the project file. Examples of some conditions where an exemption from the DGLVR Stream Crossing Standard may be requested:

- Small channels that fall outside the automatic exemptions above.
- Crossings with extensive outlet drops that would make establishing connectivity impossible or prohibitively expensive for the amount of habitat improvement it would provide.
- Other stream crossings with special circumstances.

A signed “SCC Approval for Exemption from the DGLVR Stream Crossing Standard Request” form (Appendix I) must be kept in the project file.

7.1.3.3 Details for Exemptions from the DGLVR Stream Crossing Standard

What is waived with an Exemption from DGLVR Stream Crossing Standard (either automatic or SCC):

- The need to follow the DGLVR Stream Crossing Design and Installation Standard,
- The need to achieve stream continuity as it relates to slope, streambed material depth, and establishing grade control within the structure, and
- The need to establish a low-flow channel and bank margins through the structure.

Requirements for projects covered by an Exemption from DGLVR Stream Crossing Standard (either automatic or SCC).

If continuity cannot be achieved, the following steps must be taken to ensure stream crossings that receive an exemption from the DGLVR Stream Crossing Standard will still result in a stable crossing that will not lead to accelerated erosion or other issues:

- Any requirements from local, state, and federal laws and all applicable permits are **not** waived as part of this exemption and must be followed.
- New structures must still be a single span at a minimum of 1.25 times or 125% of the bankfull channel width unless otherwise approved by the SCC.
- Ensure the stability of the channel upstream and downstream. Grade controls must be shown on plan drawings if drawings are required.
 - Upstream: Grade control(s) are required immediately (between one and two bankfull widths) upstream of the inlet of the new structure to prevent headcutting (headward erosion lowering channel elevation that moves upstream over time). These grade

controls are typically installed at the existing streambed elevation. If a larger structure is installed in a channel with road height limitations, installing a larger structure below the existing streambed elevation without grade control(s) will likely cause a headcut.

- Downstream: Outlet stabilization is required in the form of grade controls, bank armoring, and/or filling in scour holes. Any grade controls are typically installed at the existing streambed elevation. Pipes may need to be extended further off the road, and the erosion potential caused by any elevation drops must be considered.
- New structures must be properly aligned with the channel, unless this is not feasible due to permitting restrictions or other constructability restraints.
- Consider floodplain connectivity when necessary (e.g., high water by-pass, overflow pipes, etc.).
- If permits and engineered plans are required, conservation districts are required to review all plans and specifications to ensure the project complies with DGLVR policy and requirements before they are submitted for permit review.
- Divert surface runoff and road drainage away from the stream and structure in a manner that prevents erosion and prevents discharges to the stream.
- For projects receiving an exemption from the DGLVR Stream Crossing Standard, other site-specific requirements may apply. If applicable, these will be identified by the SCC on a project-specific basis.

Warren County Quality Assurance Board Stream Crossing Priority Rating Worksheet

Severity of Barrier (NAAC):

Minor: 5 Moderate: 10 Severe: 15 _____ (15)

Structure/Bankfull Ratio:

100%: 0 <100%: 5 <75%: 10 <50%: 15 _____ (15)

Miles of Stream Reconnected

<0.5: 0 <0.75: 5 <1: 10 >1: 15 _____ (15)

Stream Bank Erosion (downstream):

None: 0 Present: 5 Severe: 10 _____ (10)

Stream Bank Erosion (upstream)

None: 0 Present: 5 Severe: 10 _____ (10)

Stream Bed Erosion (downstream)

None: 0 Present: 5 Severe: 10 _____ (10)

Stream Bed Deposition (upstream)

None: 0 Present: 5 Severe: 10 _____ (10)

Stream Crossing Subtotal: _____ (85)

Point Summary:

Total Project Score: _____ (325 possible points)

Stream Crossing Score: _____ (85 possible points)

TOTAL SCORE: _____ (410 possible points)

Ranking: _____

Excerpt from Dirt, Gravel, and Low Volume Road Administrative Manual, July 2022

Chapter 7: Additional Program Policies

7.2 Driving Surface Aggregate (DSA)

This section applies primarily to **Dirt and Gravel funds**, but DSA may have limited use under Low-Volume funds, such as the conversion of a paved road back to gravel. Technical details for DSA including placement and purchasing specifications are not included in this administrative manual. See the Center's Aggregate Handbook for technical documentation.

7.2.1 DSA Overview

DSA is a crushed stone mixture developed by the Center in 2001 to be used as a wearing course for unpaved roads. DSA is designed to achieve maximum density compared to other aggregates in order to resist erosion and support traffic. DSA has a few key differences compared to traditional aggregates such as PennDOT 2A or 2RC:

- Well graded to include a range of rock sizes from 1.5" to "stone dust".
- 11-15 percent of the material is composed of "rock fines" that bind the material together (up to 17% fines if Plasticity Index is less than 2).
- Placement by motor paver is highly encouraged, and required for placements over 500 tons.
- Several other requirements including a maximum plasticity limit, a pH range, a minimum hardness specification, and optimum moisture requirements.

7.2.2 Use of DSA

The Program goal is to improve water quality. DSA is designed to resist erosion and stand up to the forces of traffic. DSA has been proven to reduce sediment loads compared to traditional aggregates by as much as 90 percent, and reduce dust by as much as 75 percent. Since DSA was designed to resist erosion, it was originally intended to be placed on sections of road adjacent to streams where draining road runoff to the waterway is unavoidable. Over the years, DSA has evolved into a "standard practice" on projects in many districts, and is being overused. DSA is NOT a required component of every Program project. The extent to which DSA is used on projects is at the discretion of individual Districts and QABs. When DSA is used as part of a project, it should be the very last phase of the project. DSA alone does not constitute a comprehensive Program project. All possible base and drainage improvements (new pipes, underdrain, road fill, French mattresses, etc.) must be completed first to reduce environmental impacts of the road and extend the longevity of the DSA. Avoid placing DSA on entrenched roads, or on roads where surface drainage issues are not resolved.

7.2.3 Exception to Using DSA on Fill Projects

Driving surface aggregate meeting the Commission's Standard and Specification is the only approved road surface material that may be purchased (for DGR projects) with Program funds. The only exception to this is on road fill projects. Road fill projects are defined as projects which install an average compacted thickness of 12-inches or more of fill material, not including the driving surface, to allow for proper drainage and/or strengthen the existing road base. Road fill projects must be capped with DSA or an alternative aggregate at a minimum

depth of 6-inches. Shale or bank-run gravel may not be used as the final driving surface. This exception is not meant to replace DSA with fill.

7.2.4 DSA Certification

DSA must be placed in accordance with the DSA specification and certification found in the [DSA Handbook](#). A DSA certification is required for every project where DSA is used. The DSA certification does not apply to an entire quarry. The DSA certification applies only to a particular source or pile of DSA that is being purchased. Additional certifications are required if the quarry changes the DSA production process (for example switching to a different seam of stone). The DSA certification must be obtained by the grant applicant before aggregate is placed, and must be kept with project files.

7.2.4 DSA Quality Control

DSA must be sampled and tested by an independent lab before it is delivered to a project site. Sampling can be done by district representatives following the guidelines in the Aggregate handbook. **DSA sampling, testing, and approval is “pile-specific”, not “quarry-specific”.** Testing must be done on the aggregate pile that is directly supplying the job. The costs of testing can be incorporated into project costs, or paid out of a district’s admin/education funds. Sampling can also be done by the Center’s “DSA Clearinghouse”.

The Center will act as a “DSA Clearinghouse” for DSA projects. The purpose of this DSA Clearinghouse is to ensure quality DSA purchase and placements for districts statewide by:

- Visiting and talking with quarries to ensure they understand the DSA requirements.
- Collecting samples and performing testing to ensure DSA meets all material requirements before delivery and placement.
- Keeping records of aggregate testing to avoid duplicating efforts.
- Establishing a central point of contact for quarries on DSA issues.
- Assistance with contractor coordination.
- On-site assistance during DSA placement.

If districts plan to use the DSA Clearinghouse, it is recommended that they contact the Center when a potential DSA supplier is chosen, at least 30 days before placement. Notification can be made utilizing the DSA Purchase Notification Form, provided in the Aggregate Handbook, or on the Center’s website. **If districts choose to sample their own DSA, they should share testing results with the Center** in order to provide a more comprehensive statewide database and avoid duplicate testing.

Warren County Quality Assurance Board Priority Rating Worksheet

Dirt & Gravel Road Program

PROJECT # _____ TOWNSHIP _____

ROAD NAME _____ STREAM AFFECTED _____

Dirt, Gravel, and Low-Volume Road Grant Application Ranking

SECTION 1: APPLICATION VALIDATION

Select type of application	
☐	Unpaved (Dirt and Gravel)
☐	Paved (Low Volume Road)

	Circle Choice	
Does this road site negatively impact a stream, lake, wetland, or other water body?	YES	NO
Will the proposed project reduce environmental impacts to a water body?	YES	NO
Is someone from the applying entity "ESM Certified" within the past 5 year?	YES	NO
Does the proposed application meet all SCC requirements (non-pollution, pipe size, etc.)	YES	NO
Does the proposed application meet all policies adopted by the local County QAB?	YES	NO
Has the applicant identified and agreed to obtain all necessary permits & Off-ROW permissions?	YES	NO
<u>LVR ONLY:</u> If the traffic count is known at this point, is it 500 vehicles per day or less?	YES	NO unavailable

(note traffic count is required before contract is signed)

If any of the questions above are answered "NO", the application is currently not eligible for funding.

SECTION 2: APPLICATION RANKING

SEVERITY OF PROBLEM

1. "Modified" Worksite Assessment:

a. Road Drainage to Stream:

None-0	Slight-5	Moderate-10	_____ (15)
Severe-15			

b. Wet Site Conditions:

Dry-0	Saturated Ditches-3	Roadside Springs-5	_____ (10)
Flow in Ditches-7	Saturated Base-10		

c. Road Surface Condition

i. LVR EVALUATION: Pavement Condition

Good-0	Fair, some cracking-5	Poor, cracking, unevenness-7
Damaged-10	Severely Damaged-15	

ii. D&G EVALUATION:

Hard Gravel-0	Mixed Stone-5	Soft Stone-7
Mixed stone/dirt/dust-10	Severe Dust-15	

d. Road Slope:

<5%-0	5-10%-5	>10%-10	_____ (10)
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Project #: _____ Township: _____ Road Name: _____

e. **Road Shape (cross-slope/crown):** _____ (5)
 Good-**0** Fair- **3** Poor-**5**

f. **Slope to Stream:** _____ (5)
 <10%-**0** 10-30%-**3** >30%-**5**

g. **Distance to Stream:** _____ (5)
 >100'-**0** 50'-100'-**3** <50'/crossing-**5**

h. **Outlet to Stream:** _____ (5)
 None-**0** Near Stream-**3** Directly to Stream-**5**

i. **Outlet Stability (consider all outlets, pipes, ditches, etc.):** _____ (5)
 Stable-**0** Moderate-**3** Unstable-**5**

j. **Bank/Ditch Stability:** _____ (10)
 Stable-**0** Moderate-**5** Unstable-**10**

k. **Bank Height:** _____ (10)
 <3 feet- **3** 3 – 10 feet -**7** >10 feet -**10**

l. **Vegetative Ground Cover (consider ditch and banks):** _____ (5)
 Stable (<30%)-**0** Partial (30-60%)-**3** Unstable (>60%) -**5**

m. **Length of Road Affecting Stream:** _____ (10)
 <500 feet -**3** 500 -1000 feet-**7** >1000 feet -**10**

2. Classification of stream or waterbody impacted:

a. **Water Quality of Affected Stream:** _____ (25)

25 STREAM IS A SOURCE OF MUNICIPAL WATER SUPPLY

20 STREAM IS CLASSIFIED EXCEPTIONAL VALUE (EV)

15 STREAM IS CLASSIFIED HIGH QUALITY (HQ)

10 STREAM IS CLASSIFIED COLD WATER FISHERY (CWF)

5 STREAM IS CLASSIFIED WARM WATER FISHERY (WWF)

b. **Trout Classification of affected stream:** _____ (20)

20 STREAM IS LISTED AS VERIFIED WILD TROUT REPRODUCTION AREA

10 STREAM IS ON PFBC STOCKING LIST

0 STREAM IS NOT ON PFBC STOCKING LIST

Severity of Problem Subtotal: _____ (155)
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Road Name: _____

Dirt, Gravel, and Low Volume Road Maintenance Program (DGLVRP)

Traffic Count Policy **SCC approved 9/9/2014**

Background

PA Act 89 of 2013 expanded Pennsylvania's Dirt and Gravel Road Maintenance Program to include "...maintenance of sections of low volume roads that are sealed or paved with an average daily traffic count of 500 vehicles or less". The purpose of this document is to outline the policies and guidance regarding verifying traffic counts on paved Low Volume Roads for funding eligibility under the PA Dirt, Gravel, and Low Volume Road Program.

Overview

Before a contract can be signed for a Low Volume Road project, the applicant is responsible for validating that the road has 500 vehicles per day or less consistent with Commission and any local QAB policy.

- Applicant is responsible for providing traffic counts before a contract can be signed.
- A traffic count is not required in order to submit an application, unless required by local QAB policy.
- Conservation District is responsible for verifying that a count exists, and that the count meets the criteria established in state and local policy.
- Traffic counts are considered valid for a period of 5 years, provided there are no new significant changes in traffic flow volumes or patterns.
- Documentation of traffic counts using a signed "Traffic Count Validation Form" must be retained with project files according to the Commission's record retention policy. Districts may opt to include the completed traffic count validation form as an attachment to the project Contract.
- Conservation Districts may, at their discretion, use administrative and education funding to facilitate or support traffic counts for applicants. Districts should insure that all potential applicants have equal access to any traffic count facilitation measures they may employ.
- Traffic counts only apply to a segment of road between intersections, not to an entire length of road. Application sites that include intersections may require multiple counts.
- Traffic counts should be done on the proposed project location, or on a road that insures that traffic on the project location can be determined.

OBTAINING TRAFFIC COUNTS

Acceptable documentation of traffic counts for projects to be eligible for LVR funds include:

Option A: Use or extrapolation of existing data.

Option B: Level 1 Count: 2 hour traffic count.

Option C: Level 2 Count: 24 hour automated count.

OPTION A:

Validate with Existing Traffic Count Data, or Extrapolation from Existing Data

Use of Existing Data:

Existing traffic counts can be used to verify road eligibility for LVR funding. Existing Data must have been collected within the previous 5 years and conform to the Program's Level 2 count protocol at a minimum. "Estimated" traffic counts that exist for many municipal roads cannot be used.

Extrapolation of Existing Data:

It is permissible to use existing data for roads with 500 vehicles per day or less to logically extrapolate to subsidiary roads. (For example, a spur road between two State Roads where both state roads have less than 500 vehicles per day must also have less than 500.) This extrapolation of data can be used to verify that a road has 500 vehicles per day or less without performing a count. This extrapolation of traffic counts must prove the ADT on the road is 500 or less to be eligible for LVR funding.

Potential sources of existing traffic count data:

- State Roads:
<http://www.dot.state.pa.us/Internet/bureaus/pdplanres.nsf/infoBPRTrafficInfoTrafficVolumeMap>
- Local Roads: PennDOT regional offices or County Planning Commissions.

OPTION B:

Validate with Level 1 Count: 2 hour count

An applicant may do a Level 1 count to determine the traffic count on a potential project site. This involves counting traffic for a two hour period, either by hand tally, video recording, or an automated traffic counter. A Level 1 traffic count of 500 vehicles per day or less will qualify the road for LVR funding. A Level 1 traffic count must meet the following criteria:

- It must be conducted between March 1 and the week before Thanksgiving.
- It cannot be conducted on a holiday, or the day before or after a holiday.
- It must be conducted on a Tuesday, Wednesday, or Thursday
- It must be conducted for a minimum of two consecutive hours between 3:00 pm and 6:00 pm.
- Only the number of vehicle passes is counted, regardless of direction of travel or type of vehicle.
- The traffic count for the time period will be adjusted to a 24 hour period by simply multiplying the 2 hour count volume times twelve (12)
- Applicants may skip the level one count and go straight to a level 2 count if desired
- Only licensed motor vehicles should be counted.

If a Level 1 Traffic Count produces a count of **500 vehicles per day or less**, the project on the road is considered eligible without a Level 2 Traffic Count. If a Level 1 Traffic Count produces a count of **more than** 500 vehicles per day, it does not disqualify the road, but necessitates a Level 2 Traffic Count because of its increased accuracy. The purpose of a Level 1 count is to provide a reasonably accurate traffic count with minimal time investment.

Level1 Count Examples:

Example 1: A traffic count for two consecutive hours between 4:00 pm and 6:00 pm produces a count of 25 vehicles. $24\text{hours (per day)} / 2\text{hours (per study)} = 12$

$$12 \times 25 = \underline{300 \text{ average daily count.}}$$

This worksite would be eligible (no level 2 count needed).

Example 2: A traffic count for two consecutive hours between 3:30 pm and 5:30 pm produces a count of 53 vehicles. $24\text{hours (per day)} / 2\text{hours (per study)} = 12$

$$12 \times 53 = \underline{636 \text{ average daily count.}}$$

This does not disqualify the road. It simply means that a more accurate Level 2 Count is required if the applicant wants to continue to pursue Program funding.

OPTION C:

Validate with Level 2 count: 24 hour automated count

A level 2 count involves the placement of an automated traffic counter on the road for a minimum period of 24 hours. Note that these are the minimum criteria for a count. More comprehensive or longer counts can be substituted as long as they meet the minimum requirements below for a “level 2 count”. A Level 2 traffic count of 500 vehicles per day or less will qualify the road for LVR funding. Level 2 counts supersede Level 1 counts if there is a discrepancy. A level 2 traffic count must meet the following criteria:

- It must be conducted between March 1 and the week before Thanksgiving.
- It cannot be conducted on a holiday, or the day before or after a holiday.
- It must be conducted between 12 AM Tuesday and 12 AM Friday.
- It must be conducted for a minimum of 24 consecutive hours.
- Only the number of vehicle passes is counted, regardless of direction of travel or type of vehicle.

If a Level 2 Traffic Count produces a count of **500 vehicles per day or less**, the project on the road is considered eligible. If a Level 2 Traffic Count produces a count of **more than** 500 vehicles per day, a project on that road is not eligible for LVR funding. 24 hour counts do not have to be broken up by hour or any smaller time unit.

The criteria described in the Level 2 traffic count represent a “minimum acceptable criteria”. Counties may use or adopt more stringent traffic count requirements as long as it meets or exceeds the requirements here. (A more stringent requirement is a count that provides more statistically accurate data. For example: requiring Level 2 counts for all roads; requiring 48 hour counts, or requiring hourly totals on counts to provide information to PennDOT.)

Seasonal activities and special circumstances:

A traffic count survey cannot be conducted in a timeframe or manner that intentionally causes artificially low average daily traffic counts on a particular road segment. This includes conducting a traffic count during summer recess for a school access road, or conducting a traffic count when access to a road segment is temporarily or partially restricted or reduced (i.e. detoured, weight, or size restricted, etc.) or conducting a traffic count in any other timeframe or manner that intentionally causes low average daily traffic counts.