PA Dirt, Gravel, and Low Volume Road Program
New-Hire Guide for Conservation District Staff

3/2024

This guide is intended for new "technicians" responsible for administering the DGLVR Program at a Conservation District.

Contents

Are you reading a printed copy of this guide? That's great, but there are many links to other information and resources contained here. It is highly recommended to use the digital version to take advantage of the live links.

Online Version:

https://dirtandgravel.psu.edu/pa-program-resources/program-specific-resources/reference-material/

Since personnel change, names are not included in this guide. For current DGLVR names and contact information for both the SCC and CDGRS, visit: https://dirtandgravel.psu.edu/about-the-center/center-info/staff-contact-us/

1. Program Introduction

The Dirt, Gravel, and Low Volume Road (DGLVR) Program is a water quality program that deals with roads. Improving water quality and roads should be the principle focus of Environmentally Sensitive Maintenance projects completed with DGLVR funds. The Program was conceived as a practical and effective initiative to address sediment pollution from unpaved public roads in Pennsylvania. This summary guide outlines the roles of County Conservation District staff in implementing the Program at the county level. Recognizing Pennsylvania's geologic and geographic diversity, considerable local control and customization is built into administering the DGLVR Program. For this reason, each County may take a slightly different approach when administering the Program.

Program Overview and Purpose

The Dirt, Gravel, and Low Volume Road Program (Program) began in 1997 stemming from a grassroots initiative by PA citizens and Trout Unlimited. The goal of the Program is to reduce pollution to PA's waterways while improving the local road network. The Program directs funding to "worksites" where road runoff is affecting water quality. Long-term fixes to local public roads are implemented through innovative maintenance practices, resulting in more environmentally and economically sustainable roads. The Program meets its goals through education, outreach, and project funding.

- **The Program receives an annual appropriation of $28 million** from the PA Motor Vehicle License Fund.
- **The PA State Conservation Commission (SCC) administers** the Program statewide and allocates project funds, administrative funds, and educational funds to individual County Conservation Districts.
- **County Conservation Districts** administer the Program at the county level and provide grant funding to Program participants. Each county empanels a **Quality Assurance Board** (QAB) to assist in local policy and funding decision making.
- **Program Participants** are public road owning entities (typically townships) that apply to the Conservation District for grant funding, and either complete the project work themselves or contract it out.
- **Eligible "worksites"** are publicly owned roads open to licensed motor vehicle travel at least two weeks per year. Worksites are sections of dirt and gravel or low volume roads that are negatively impacting water quality of a nearby stream, lake, wetland, or other water resource. Low Volume paved Roads (LVR) have a paved or sealed surface and must have an average daily traffic count of 500 vehicles per day or less to be Program eligible. Unpaved Dirt and Gravel Roads (DGR) have no traffic restrictions. Conservation Districts receive separate allocations of LVR and DGR funding.

Brief Overview of DGLVR Program Structure and Administrative Roles

State Conservation Commission (SCC) – State Level
The PA State Conservation Commission (SCC) is a 14-member administrative commission that provides support and oversight to PA county conservation districts. It is under the concurrent authority of the PA Department of Environmental Protection (DEP) and Department of Agriculture (PDA) and is administratively housed within PDA. The SCC administers several conservation district programs statewide, including the DGLVR Program. SCC responsibilities include:

- Establish statewide DGLVR Program policies.
- Allocate DGLVR Program funds to Conservation Districts.
- Implement a quality assurance/quality control (QAQC) plan.
- Provide general oversight of the Program.
- Collect data on Program expenditures and projects and report this information to the PA lawmakers annually.

County Conservation District (CD or "district") – County Level
Conservation districts vary widely across PA in both their size and the state and federal natural resource programs they manage. Local administration of the DGLVR Program is handled by the county conservation district, which is the point of contact for active and prospective Program participants. The CD assigns a staff member, or staff members, to

work with Program participants to develop and complete effective road projects incorporating ESM principles. Some of their responsibilities include:

- o Administer the Program within the county.
- o Provide education and outreach to potential grant applicants.
- o Work with potential grant applicants on the development of road projects.
- o Contract with grant recipients to provide funding for the project.
- o Oversee project implementation and final inspection.
- o Report expenses and the project practices implemented using an online GIS system.

Quality Assurance Board (QAB) – County Level

The county Quality Assurance Board (QAB) is a four-person committee established within each County. The QAB is comprised of a representative from the PA Fish and Boat Commission (PAFBC), a representative from the Natural Resources Conservation Service (NRCS), and two representatives from the conservation district. A QAB member from each organization has voting privileges and one of the conservation district members is the non-voting Chairperson. Some of the QAB responsibilities include:

- o Recommend local DGLVR policies to the CD board to be implemented within the county.
- o Establish written ranking criteria for grant applications.
- o Recommend grant applications to CD board for funding.

As an advisory board, QAB recommendations must first be adopted by the District Board before becoming local DGLVR policy or spending DGLVR project funds.

Program Participants/Public Road Owning Entities – Primarily Local Municipalities (townships, boroughs, etc.)

Townships comprise most grant recipients in the DGLVR Program. However, the Program is open to public road owning entities in Pennsylvania including, but not limited to, counties, boroughs, cities, the PA Fish and Boat Commission, and PennDOT. Participant responsibilities include:

- o Become eligible for Program funding by attending Environmentally Sensitive Maintenance (ESM) training.
- o Submit an application to Conservation District for funding consideration.
- o Sign a contact with Conservation District upon grant approval.
- o Obtain all necessary permits required for completion of the proposed work.
- o Complete project work in-house, and/or hire contractor(s) to complete project work.
- o Submit receipts for all expenditures to Conservation District.

Penn State Center for Dirt and Gravel Road Studies (Center)

The Center is sponsored by the State Conservation Commission and the PA DCNR Bureau of Forestry to provide education, outreach, and technical assistance to all Program stakeholders. Some Center responsibilities include:

- o Provide ESM training and certification required for Program eligibility.
- o Provide on-site and remote technical assistance to conservation districts and other Program participants.
- o Administer statewide GIS system to track projects and expenditures.
- o Assist the SCC with administrative and policy functions.
- o Provide a wide variety of other trainings for conservation districts including ESM Boot Camps, Stream Crossing Replacement Trainings, GIS trainings, and more (for more information see **Educational Opportunities**).

For more detailed information on Program history and structure, see Chapter 1 of the DGLVR Administrative Manual: https://dirtandgravel.psu.edu/pa-program-resources/program-specific-resources/administrative-guidance-manual/1-introduction/

2. Conservation District Role

The local cooperative effort of conservation districts and Program participants is why the Program works and has proven a successful initiative. Some districts employ a full-time DGLVR technician, while in other districts the DGLVR technician is involved in managing several programs. Each district is responsible for:

- Program promotion and outreach to potential applicants, including notification of available funding.
- Pre-application, pre-design, and pre-construction site visits with applicants.
- Receiving, reviewing, and ranking grant applications (QAB).
- Awarding funds to, and contracting with, successful grant applicants.
- Active project oversight and assistance.
- Final project inspection, record keeping, and completion report.
- Reporting project details in the DGLVR GIS Mapper program.

Receiving Funds from the SCC

Districts enter a 5-year contract with the PA SCC to receive annual allocations of DGLVR funds from the $28 million state appropriation. The Program follows the state fiscal year, which runs from July 1 – June 30. Funds are used to provide grants and pay associated administrative and educational Program costs. Districts receive separate Dirt and Gravel Road (DGR) and Low Volume Road (LVR) allocations, which are determined based on the county's existing road network. 50% of each DGR and LVR allocation is provided as advance working capital to the district, typically in the late summer/fall. As expenditures are quarterly reported in the DGLVR GIS program, funds remaining in the district's DGR and LVR allocations are automatically replenished to the district. CD funding allocations, and details about the apportionment can be found at: https://dirtandgravel.psu.edu/pa-program-resources/program-specific-resources/conservation-district-allocations/

Breakdown of Conservation District Program Funds

Conservation districts receive two separate allocations, one to fund the DGR portion of the Program and one for the LVR portion. Both the DGR and LVR allocations are further broken down and tracked separately as:

- **Project funds: A minimum of 80%** of a CD's allocation must be used as grant funds for projects.
    - Grant funds are expended directly on road projects via contracts with road owners (participants).
    - Project funds must be spent by the CD within two years of state budget approval.
    - After contracting with a grant recipient for a project, districts can advance up to 50% of the contract amount to the grant recipient.
- **Administrative funds: A maximum of 10%** of the CD's allocation.
    - For county-level administration of the Program.
    - Includes expenses such as staff time, travel, equipment, etc.
    - Funds may be spent on administrative expenses within the first fiscal year of the allocation.
- **Education funds: A maximum of 10%** of the CD's allocation.
    - For county-level educational efforts related to the Program.
    - Includes expenses for attending or providing demonstrations, trainings, site tours, etc.
    - Funds may be spent on education expenses within the first fiscal year of the allocation.

Project Detail and Financial Reporting

Districts are encouraged to continuously report project details and financial activity through the **DGLVR GIS Mapper** program and are required to update the GIS at least quarterly before submitting the quarterly report. Each district utilizes a secure login to access the GIS program to enter data about specific projects as well as administrative and education spending and income received at the CD. Access to the online mapper is also required to make new contracts and complete quarterly reports. More information to follow about this mapper.

For more detailed information on the CD's role and Program administration, see Chapter 3 of the DGLVR Administrative Manual: https://dirtandgravel.psu.edu/pa-program-resources/program-specific-resources/administrative-guidance-manual/3-conservation-districts-role/

3. Determining <u>your role</u> in the local Program.

Local Control?

The local control and customization built into the DGLVR Program requires that you do some investigation and inquiry to see how the Program is administered in your county.

The "to do lists" that follow will vary slightly from county to county based on how your role and responsibilities are defined by the conservation district. In some cases, one staff member covers projects, administration, budgeting, and reporting for the entire DGLVR Program. In other cases, these duties are broken out across multiple staff members.

Some general DGLVR roles within the CD include:
- o **Field Technician:** handles Program promotion, project design, and oversight in the field.
- o **Administration:** handles paperwork associated with project and Program administration.
- o **Reporting:** handles the GIS reporting of finances and deliverables to the SCC.
- o **Financial:** handles bookkeeping, writing checks, etc.

Your role may stretch across several of the above categories.
Talk to your manager to ensure that you understand your role within the Program.

4. IMMEDIATE To-Do List

- o **Register for upcoming training opportunities:** Various training courses are held throughout the year and across the state. Check the schedule on the website link below so you don't miss an opportunity that might be fast approaching. *See later section describing educational opportunities in detail.* (Trainings and Registration: https://dirtandgravel.psu.edu/education-training/)

- o **Identify any "institutional knowledge" at the CD:** Districts are encouraged to have some overlap in job responsibilities, so when an employee takes leave another staff member will have some experience with the Program. Long-term CD staff and QAB members can provide valuable information.

- o **Introduce yourself to major Program partners:**
    - o **SCC:** Contact the staff at the SCC with any questions and let them know you are on board.
    - o **CDGRS:** Contact the Center so they can help with your technical and reporting duties.
    - o **QAB**: As described earlier in this guide, the QAB is the "steering committee" for local policy and project decisions. Take the time to seek out QAB members and have them fill you in on local priorities. QAB members who have been there for some time may have some institutional knowledge they can share with you as well.
    - o **Current grant recipients with open contracts**: Do this after you have completed the next task.

- o **Identify projects with active open contracts:**
    - o **DGLVR GIS Mapper:** as described above, all Program finances and projects are tracked in an online mapping and reporting system.
        - ▪ **Contact CDGRS for a GIS status report:**
            - • The GIS can produce a master list of all active contracts.
            - • The GIS also tracks funding and can provide helpful financial information.
        - ▪ **Set up training for DGLVR GIS Mapper:**
            - • Contact the CDGRS to set up a one-on-one (remote) training for the GIS system. Once complete, you will be given login credentials to access and update the system.
    - o **Project Hard Files:**
        - ▪ Using the information from the GIS mapper, gather all active project hard files. Check with other CD staff to also see where files may be kept electronically.
        - ▪ Consult with your district manager and/or other CD staff to identify if the GIS is up to date with all contracts recommended by the QAB and approved by CD board.

- o **Review and address projects with active open contracts:**
    - o Identify which projects are completed, in-progress, or upcoming.
    - o prioritize review of in-progress projects, or projects about to start.
    - o **Things to look for in hard files:**
        - ▪ Important documents such as grant application, project sketch, scope of work, project narrative, and any checklists can give you a good sense of the overall project intent.
        - ▪ Proposed start and completion dates.
    - o After reviewing each hard file, contact each grant recipient to determine the status of their project and any immediate issues. It is suggested to set up an on-site meeting to review the status and plan for each project. To aid discussion with grant recipients and contractors, consider using the DGLVR Pre-Construction Checklist (optional form) as a guide: https://dirtandgravel.psu.edu/wp-content/uploads/2022/03/Pre_Construction_Checklist.pdf
    - o **Other Resources:**
        - ▪ **District staff:** Ask your manager or other district staff for knowledge of open projects, experience with grant recipients, or pertinent local knowledge.

- **CDGRS:** Sometimes, CDGRS staff are involved in project planning and can provide project background and assistance.
  - **Request help as needed:**
    - The DGLVR Program is structured so that a call or email to either the Center or the SCC will direct you to the assistance that you need, be it technical help, reporting, or programmatic questions.

- **Identify your CD's important dates:**
  - What are important dates coming up on your CD's DGLVR Calendar?
    - Is there a grant application deadline, or deadlines, or does your CD accept rolling application submittals?
    - How often are QAB meetings held and when are grants typically awarded?
    - Note important statewide dates and deadlines, such as DSA placement deadlines (April-September) and wild trout work restrictions for in-stream work and incorporate these into the local CD calendar.
  - Determine other important dates at the CD and how they might affect your DGLVR duties.

- **Review Allocations and Spending Timelines:** Both the DGLVR field technician and the DGLVR financial administrator should become familiar with this information (could be the same individual).
  - **District Allocations:**
    - Each district's allocations vary slightly year-to-year based on updates to data sets used in the allocation formula and how many districts are eligible for funding.
    - More details and actual allocations can be found at: https://dirtandgravel.psu.edu/pa-program-resources/program-specific-resources/conservation-district-allocations/
  - **District Spending Requirements:** Districts must spend DGLVR funds by various deadlines:
    - Districts must spend annual allocations within 2 years of state budget approval in order to be eligible for future allocations.
    - Districts may spend up to 10% of their allocations on administrative expenses and up to 10% of their allocations on education expenses within the first fiscal year of the allocations.
  - **Financial Tracking**:
    - As districts sign project contracts, receive payments, and spend their allocations, the amounts available for new expenses will vary. This financial information is tracked in the DGLVR GIS Mapper in addition to the district's typical bookkeeping and accounting practices.
    - The DGLVR GIS mapper includes a variety of helpful financial information and tools, including but not limited to:
      - Spending requirement amounts and whether spending requirements have been met
      - Funds committed to contracts
      - Funds available (to spend on projects, administrative, and educational expenses)
      - Remaining annual administrative and educational allowance
      - Any upcoming payments the conservation district may be expecting
    - Center GIS staff and SCC staff can assist with determining if spending requirements have been met, making plans on how to meet spending requirements, identifying available funds, and understanding and utilizing financial information and tools in the GIS. Reach out any time for assistance.
    - Consult with your manager and other CD staff involved in the DGLVR Program to learn about any local financial tracking tools and to check whether the GIS financial information is up to date.
    - More information about spending requirements is available in Chapter 3 of the DGLVR Administrative Manual: https://dirtandgravel.psu.edu/pa-program-resources/program-specific-resources/administrative-guidance-manual/3-conservation-districts-role/

5. LONG TERM To-Do List

- o **Review both state and local Program policies:**
    - o **State:** Familiarize yourself with the most current DGLVR Program Administrative Manual and the various aspects and requirements of the Program. DGLVR Administrative Manual: https://dirtandgravel.psu.edu/pa-program-resources/program-specific-resources/administrative-guidance-manual/
    - o **County**: Each CD has local DGLVR policies specific to their county. QAB members and knowledgeable CD staff can provide this information. When local policies are updated, districts provide the updated documents to the Center to be included on their page of the website: https://dirtandgravel.psu.edu/pa-program-resources/conservation-districts/

- o **Review the CD's most recent Quality Assurance / Quality Control (QAQC) report:** The Program conducts QAQC visits every three years check that DGLVR policies are being followed and provide constructive feedback and individualized training for each CD. The most recent QAQC report will provide a comprehensive summary of your CD's DGLVR Program finances, administration/functionality, and projects and can be used to learn strengths and areas needing improvement. Contact the SCC if you need a copy of the CD's most recent report.

- o **Introduce yourself to other Program participants**:
    - o Contact your regional DEP "Field Rep" for your county. Let them know your new role with the district.
    - o Contact all potential grant applicants in the county to introduce yourself, remind them of DGLVR funding availability, and discuss any upcoming project plans. A personal visit goes a long way.
    - o Consider presentations or displays at municipal conventions within the county.
    - o **Contact neighboring CD DGLVR technicians**:
        - ▪ Ask them for input on the Program and their advice for new hires.
        - ▪ Potentially visit some of their completed DGLVR projects with them.
        - ▪ CD DGLVR personnel: https://dirtandgravel.psu.edu/pa-program-resources/conservation-districts/

- o **Review the DGLVR Mapper GIS program in detail:**
    - o If you have not already, set up training for DGLVR GIS Mapper: Contact the CDGRS to set up a one-on-on (remote) training for the GIS system. Once complete, you will be given login credentials to access and update the system.
    - o If this is your responsibility at the district, you will want to familiarize yourself with this system. Learn how to access the GIS program, what data is required to be entered, and when data reports are due.

- o **Review recently completed projects:**
    - o **Use the GIS project summary** to create a big picture overview of completed projects.
    - o **Identify and review the hard files** for recently completed projects.
        - ▪ **Project Sketch:** The project sketch/plan is attached to the grant application and scope of work for the project. This should provide a big picture overview of the project and identify the types and locations of ESM practices used.
        - ▪ **Completion Report:** This will summarize spending and deliverables for the project.
    - o **Visit completed projects in the field:** Reviewing active and recently completed project files can be a good way to get a feel for the paperwork and record-keeping involved in project administration.
        - ▪ Take project hard files into the field for review.
        - ▪ Take the most recent QAQC report in the field (if project was visited).
        - ▪ Invite other CD staff (or QAB members) that might have knowledge of the project.
        - ▪ Consider meeting with grant recipients on site to review their project.

- o **Attend educational courses:** Continue professional development through various DGLVR training courses and external resources that are described in the remainder of this document.

6. Education Opportunities

In-Person DGLVR Training Courses:

The in-person training courses held by the CDGRS and SCC are summarized below. Current dates and registration information can be found at: https://dirtandgravel.psu.edu/course-registration/#

- o **Environmentally Sensitive Maintenance (ESM) Training:**
  - o **Required for CD staff** administering the DGLVR Program.
  - o **Required** for at least one conservation district QAB member.
  - o **Required** for grant applicants/program participants.
  - o An intensive and comprehensive two-day classroom training course covering the practical aspects of the DGLVR Program. The training focuses on the principles and practices employed on DGLVR projects but also includes some administrative information. Those who attend the training receive certification, and participants become eligible for grant funding, valid for 5 years.
  - o 12 trainings held each year. More info: https://dirtandgravel.psu.edu/education-training/esm-course/

- o **DGLVR Administrative Training:**
  - o **Required for CD staff** administering the DGLVR Program.
  - o The training covers DGLVR Program administrative policies and guidance in detail. Certification is valid for 3 years.
  - o 2-5 held each year. More Info: https://dirtandgravel.psu.edu/education-training/program-administration/

- o **DGLVR Financial Training:**
  - o Not required but recommended for all CD staff involved in tracking, spending, or reporting DGLVR funds.
  - o 2-5 held each year. More Info: https://dirtandgravel.psu.edu/education-training/program-administration/

- o **Stream Crossing Training for CDs:**
  - o **Required for CD staff** in DGLVR Program at those districts electing to fund stream crossing replacements. Districts not funding stream crossings are not required to attend.
  - o An intensive multi-day course on the details of stream crossing replacements through the DGLVR Program. Includes both classroom and field sessions. Certification is valid for 3 years.
  - o 2-3 held each year. More info: https://dirtandgravel.psu.edu/education-training/stream-crossings/

- o **Annual Workshop:**
  - o Not required, but a popular and well-received training event.
  - o Held at a different location every year, the statewide Workshop serves as an annual DGLVR conference or summit and digs deeper into the subjects covered in the ESM training. It typically draws 150-200 attendees and includes concurrent classroom sessions as well as multiple field trips. The workshop allows for certification renewal of the ESM training for both county staff and program participants.
  - o One is held each fall. More info: https://dirtandgravel.psu.edu/education-training/annual-maintenance-workshop/

- o **ESM Boot Camp:**
  - o Not required, but highly recommended for new hires.
  - o A multi-day training held near State College. Includes both classroom and field sessions, with a focus on building the technical skills to facilitate the DGLVR Program at the county level. Attendees gain experience with site diagnostics (workplan development), surveying, estimating, and bidding, as well as aspects of road construction and innovative ESM practices. The training is intended for those new to the DGLVR Program but can serve as a refresher for experienced technicians as well.
  - o 1-2 held each year. More info: https://dirtandgravel.psu.edu/education-training/esm-boot-camp/

- o **Technical Assistance and QAQC Visits:**
  - o Not official "trainings", but CDGRS and SCC staff are available for technical support and one-on-one trainings in the field and remotely.
  - o Onsite troubleshooting or an outside opinion regarding an ESM approach to a project site can be a very effective way to develop the knowledge and skills to implement the DGLVR Program in your county. Use technical assistance visits by Center or SCC staff, as well as QAQC visits in your county, to improve your proficiency with site diagnosis and planning.
  - o Technical assistance is also available for other topics such as:
    - ▪ Assisting in the review of grant applications.
    - ▪ Visiting completed projects.
    - ▪ Stream crossing replacement assessments and eligibility determinations.
    - ▪ Driving Surface Aggregate testing and placement oversight.
    - ▪ Administrative and financial questions and issues.
  - o "Tech Assists" are held year-round on-demand. Call early, especially in spring and summer!
  - o Not sure where to start? E-mail: dirtandgravel@psu.edu

- o **GIS and Reporting:**
  - o Due to differences in district programs, training for GIS and reporting are typically held one-on-one, often remotely. This allows CD staff to view and use their own data during the training.
  - o Contact the Center for more information: (814) 865-5355, dirtandgravel@psu.edu.

Remote Learning Center:

The Center's online "Remote Learning Center" contains over 40 recorded training sessions for CD staff, including many pre-recorded short webinars on specific topics, as well as longer training courses on various aspects of the Program. In addition to the recorded courses, PowerPoint files are provided for CDs to use in their own educational and outreach efforts. The Remote Learning Center is divided into the categories of administrative, GIS/reporting, project work, stream crossings, and driving surface aggregate (DSA).

Of particular interest to new CD staff would be the complete DGLVR Administrative Training (5 hours), QAB Overview (35 min), and a variety of other administrative topics related to the grant application process.

Remote Learning Center:
https://dirtandgravel.psu.edu/education-training/remote-learning-center/

In addition to the remote learning center, take advantage of other professional development opportunities such as seasonal webinars that are recorded and available online. Once you are up-to-speed, you will become the trainer by developing and facilitating local trainings, workshops, tours, and demonstrations for active and potential Program participants in your county.

Past Recorded Webinars:
https://dirtandgravel.psu.edu/education-training/webinars/past-webinars/

Requesting Assistance:

Assistance is available with all aspects of the DGLVR Program. Don't hesitate to take advantage of this resource. **For assistance with technical issues**, including but not limited to site diagnostics, project planning and layout, project review, project oversight, final inspections, GIS help, and Program participant outreach contact the Center for Dirt and Gravel Road Studies (Center) at (814) 865-5355, dirtandgravel@psu.edu. **For assistance with policy, finances, and administration,** contact the SCC Program Manager at (717) 787-2103.

7. Additional Internal (DGLVR) Resources

The DGLVR website, www.dirtandgravelroads.org, is a comprehensive resource with a wide variety of information. It can be a bit overwhelming at first, so the list below is intended to highlight some of the resources that are likely to be of use to new technicians.

- o **DGLVR Administrative Manual**
  - o Official policy manual for the DGLVR Program.
  - o https://dirtandgravel.psu.edu/pa-program-resources/program-specific-resources/administrative-guidance-manual/

- o **Technical Bulletins**
  - o 2 to 4-page technical summaries of individual road maintenance practices such as underdrains, crosspipes, DSA, French mattresses, grading, and more.
  - o https://dirtandgravel.psu.edu/general-resources/technical-bulletins/

- o **Environmentally Sensitive Maintenance (ESM) Field Guide**
  - o A "dashboard" reference of ESM practices to consider when diagnosing specific road issues and proposing remediation practices.
  - o https://dirtandgravel.psu.edu/wp-content/uploads/ESM_Field_Guide.pdf

- o **Standard Detail Sheets**
  - o Several ready-made detail sheets are available for your review and use while assisting in planning projects. Sheets include crosspipes, through-the-bank pipes, a combo crosspipe and through-the-bank pipe, French Mattress, road fill/raising the road profile, road crown, underdrain, and a stone sump.
  - o https://dirtandgravel.psu.edu/general-resources/standard-detail-sheets/

- o **Blank DGLVR Forms**
  - o Comprehensive selection of DGLVR-specific forms such as: grant application, template letters, optional meeting and documentation checklists, etc.
  - o https://dirtandgravel.psu.edu/pa-program-resources/program-specific-resources/blank-forms/

- o **Stream Crossing Replacement Documents**
  - o Stream Crossing replacements are more complex than most other DGLVR projects. The Program has worked with the US Forest Service and others to develop comprehensive policy and guidance for the replacement of stream crossing structures. These policies focus on establishing stream continuity and aquatic organism passage when replacing culverts and bridges.
    - o **Policy**: Outlines DGLVR Requirements for stream crossings, inducing requiring the use of the DGLVR Stream Crossing Design and Installation Standard
    - o **Design and Installation Standard**: Standard for design and installation of stream crossing replacements with DGLVR funds.
    - o **Technical Manual:** Supporting documentation for the above policy and standard.
    - o All documents available at: https://dirtandgravel.psu.edu/stream-crossing-replacements/

- o **Driving Surface Aggregate (DSA) Handbook**
  - o DSA is an unbound (no asphalt) aggregate developed by the DGLVR Program as a wearing course for unpaved roads. The use of DSA has additional requirements and considerations compared to traditional aggregates. DSA is the only approved surface material allowed for unpaved roads with Program funding.
  - o The DSA Handbook is a comprehensive guide for the use of Driving Surface Aggregate in the DGLVR Program. Includes valuable information on DSA testing, purchasing, road preparation, DSA placement, and maintenance of DSA, as well as the DSA Standard and Specification, the DSA Certification Form, the DSA notification Form, and a fillable DSA Request for Quote.
  - o https://dirtandgravel.psu.edu/general-resources/driving-surface-aggregate-dsa/

- o **Appendix F of the DSA Handbook** is a technical bulletin called **"Road Aggregates 101"**. This bulletin is a good resource for new staff on commonly used aggregates and other crushed rock (such as rip-rap) in the DGLVR Program: https://dirtandgravel.psu.edu/general-resources/driving-surface-aggregate-dsa/

- o **DGLVR Material Calculator**
  - o The Center's website contains a calculator for estimating volume and tonnages of materials (fill, stone, aggregate) needed for road projects. Users input measurements, and the calculator uses stored densities to provide tonnages needed for things like road fill, underdrain, or Driving Surface Aggregate
  - o https://dirtandgravel.psu.edu/general-resources/dglvr-materials-calculator/

- o **DGLVR Course Attendance Tracker**
  - o The attendance tracker is an online database that can tell you previous attendance at various DGLVR training courses for CD staff as well as grant applicants. It is useful for determining which potential applicants are eligible for DGLVR funding (ESM certified).
  - o https://dirtandgravel.psu.edu/education-training/course-attendance-tracker/

- o **DGLVR Wrokplan Application**
  - o The Center has developed a mapper tool (separate from GIS project tracking) to assist in workplan development. Users can layout projects on aerial photos, measure accurate distances, draw in plan features such as pipes, underdrain, etc., and can label and print maps to serve as a project workplan.
  - o Access is through the GIS system. Contact the Center for access and training.
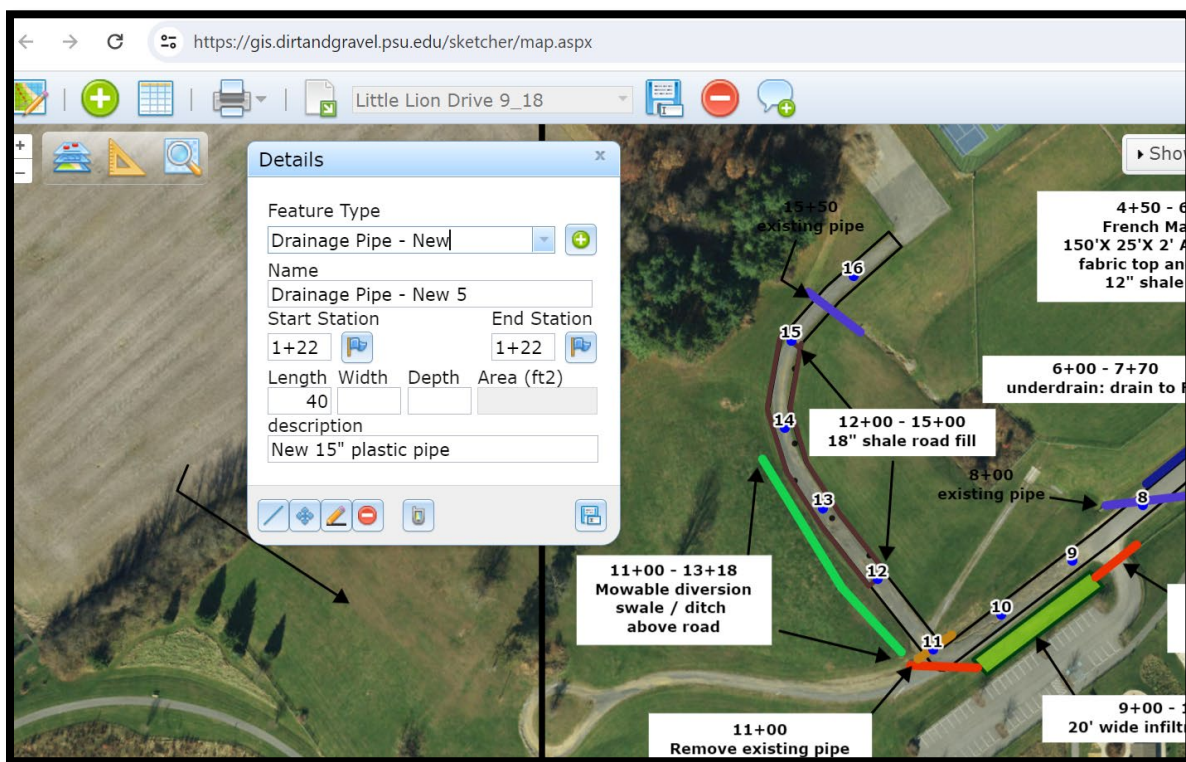
Screenshot sample from the DGLVR Workplan Application that can be used to create site maps/plans.

8. Additional External Resources

The following resources are not directly DGLVR-related, but may prove useful to new CD Technicians.

General Resources:

- **Clean Water Academy (CWA)** – The Department of Environmental Protection's (DEP) online learning platform with many recorded and self-paced trainings such as: riparian buffers, safety, stream designations, reading plans and maps, and several trainings related to Chapter 102 (Erosion & Sedimentation Control), and Chapter 105 (Water Obstructions & Encroachments for streams, wetlands, and floodways) permitting. https://pacleanwateracademy.remote-learner.net/

- **PA Local Technical Assistance Program (LTAP)** - This PennDOT Program provides free education and technical assistance to municipalities. While their target audience is municipalities, anyone can create an account and access various remote trainings on basic topics such as: safety; **construction basics**; asphalt and paving; full depth reclamation; road signs; geosynthetic fabric; stormwater; roadside vegetation; and more. https://gis.penndot.gov/ltap/

- **Penn State Extension:** While largely agricultural related, some courses and documents are available on topics related to water quality and land management. https://extension.psu.edu/

- **Municipal Online Stormwater Training (MOST) Center:** Contains various courses and recordings with a slightly more "urban" focus related to stormwater and green infrastructure. https://mostcenter.umd.edu/about-us

- **PA 811:** PA's "Call before you dig" program. Excavators (road owners and/or contractors) are required to use this service to identify underground utilities before breaking ground on a project. https://www.pa1call.org/

- **North Atlantic Aquatic Connectivity Collaborative (NAACC):** This is a multi-state effort to identify and assess barriers to fish passage in streams, typically caused by undersized road culverts. https://streamcontinuity.org/

- **Basic Highway Plan Reading:** Introduction to plan reading and stationing from The Colorado Department of Transportation. https://www.codot.gov/programs/tetp/construction-inspector-qualification/self-study-manuals/BasicHighwayPlanReading.pdf

Online Mapping Resources:

- **Web Soil Survey:** Official resource for soils maps. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

- **eMapPA:** Department of Environmental Protection's (DEP) mapping center showing steam designations, impairments, and more. https://gis.dep.pa.gov/eMapPA/

- **PA Fish and Boat Commission (PAFBC) Mapper:** PAFBC mapping center showing trout designation of streams in PA (useful because of in-stream work restrictions to protect trout). https://pfbc.maps.arcgis.com/apps/webappviewer/index.html?id=65a89f6592234019bdc5f095eaf5c6ac

- **USGS StreamStats:** This site uses stream gauges and models to provide detailed information on streams such as watershed size, expected flow rates, and more. https://streamstats.usgs.gov/ss/

- **Pennsylvania Natural Heritage Program – PA Natural Diversity Inventory (PNDI):** Used to see if threatened or endangered species are recorded in a proposed project area. https://conservationexplorer.dcnr.pa.gov/

- **National Flood Hazard Layer (NFHL) Viewer**: Provided by the Federal Emergency Management Agency (FEMA), this provides the current effective flood data for the country. This web based map tool is especially helpful in identifying any designated floodways, which is important information to know when determining if permits are required for construction near streams. https://www.fema.gov/flood-maps/national-flood-hazard-layer

- **County Tax Parcel Maps**: Many PA counties maintain online tax parcel maps. These are helpful tools when identifying who to ask for permission for any DGLVR Project work outside the public road right of way. Ask your manager and other CD staff about using your local tax parcel map.

New CD DGLVR Technician "Homework"

CD Quality Assurance Board

  QAB Members: <u>name, e-mail, phone</u>

   CD member (voting): _____

   CD member (non-voting chair): _____

   PAFBC member: _____

   NRSC member: _____

  QAB Meeting Schedule: _____

CD Finances

  CD Annual DGR Allocation: $_____   **CD Annual LVR Allocation: $_____**
  https://dirtandgravel.psu.edu/pa-program-resources/program-specific-resources/conservation-district-allocations/

  Spending Status to meet deadlines, DGR: $_____   need to spend by _____/_____/_____

  Spending Status to meet deadlines, LVR: $_____   need to spend by _____/_____/_____

   (talk to SCC/CDGRS to see what might need to be spent by what date)

Administrative

  How many municipalities are in your county?

   _____township   _____borough   ____city   _____total

  How many of those municipalities are currently ESM certified to apply for DGLVR grants? _____
  https://dirtandgravel.psu.edu/education-training/course-attendance-tracker/

  CD Application deadline(s) for applicants: _____/_____/_____

  # of DGLVR applications currently submitted to CD: _____

  # of currently active DGLVR contracts: _____DGR   _____LVR   _____total

   # involving stream crossings:_____   # involving Driving Surface Aggregate:_____

  Are there CDGRS or SCC staff that have helped or assisted with recent projects? Who? _____

  Who is your DEP field Rep?_____

Trainings: When and where are the next training courses that you can attend? *https://dirtandgravel.psu.edu/course-registration/#*

  ESM Training: _____ (required)

  Admin: _____ (required)

  Stream Crossing Training: _____ (required if your CD funds stream crossings)

  Financial: _____

  ESM Boot Camp: _____

  Annual Workshop: _____

  GIS/Reporting: *schedule directly with Center staff*