Marcellus Watch

Spring 2011, and Pennsylvania’s development of shale gas is in full swing. The road impacts of associated heavy hauling continue to highlight many Marcellus-related discussions. While bumpy roads and traffic delays receive their fair share of press, little is reported on the environmental impacts of damaged and dysfunctional roads. However, those impacts are real and significant, and they have increased the overall “need” of the Dirt and Gravel Road Program. Some of the practices being used by gas companies to address roads, while well intentioned, are damaging previously completed projects and are counter to the Program’s philosophies of disconnecting drainage, encouraging infiltration, and reducing sediment pollution to PA’s streams. Reports state that for 2010, the gas industry spent over $200,000,000 on road repairs and improvements in PA. The percentage of that spent on unpaved local roads is unknown. However, it does appear that much of the money was spent on base and surface work with far less attention paid to drainage improvements. In addition, when it comes to township roads, the industry continues to be reactive rather than proactive in their approach to road maintenance. A cooperative initiative to work with drillers to educate them on Environmentally Sensitive Maintenance Practices is gaining momentum, but needs greater support from state and local agencies to keep pace with the industry in order to make an impact.

Dirt and Gravel Program Funding

The Dirt and Gravel Road Program has received an annual allocation of $5 Million since 1997. Between inflation and Marcellus impacts, the buying power of the Program’s funding has been steadily eroded over the last 14 years. Two efforts are currently underway in Harrisburg that have the potential to provide additional funding to the Program.

The Keystone Transportation Funding Coalition is pushing for a multi-billion dollar comprehensive funding package to meet PA’s transportation needs to be acted on this fall that would likely include additional funding for the Dirt and Gravel Road Program. The Center has been involved with this group on the Program’s behalf. The various Marcellus Impact Fees being discussed in Harrisburg present another potential avenue for additional Program funding.

While the Center’s “lobbying” efforts are limited by Penn State policies, we will continue to work on both of these fronts to the largest extent possible to educate all parties on the benefits of the Program. Please feel free to contact the Center for more information.
Marcellus Impacts on Completed Projects in Bradford County

With 1,500+ miles of unpaved roads, and 2,000+ identified pollution worksites, the Bradford County Conservation District runs one of the largest Dirt and Gravel Road Maintenance Programs in Pennsylvania. Over the past 13 years, the District has spent over $3 Million to complete over 80 projects in Bradford County. In late 2010, with the Marcellus gas play in full swing, the District decided to perform an inspection of all 80+ of their past funded projects to see how they are holding up. Below is a summary of what they found from the Conservation District’s December 2010 newsletter.

“Over the years, the Bradford County Quality Assurance Board has kept asking questions like, “How are the projects holding up?” and “How do we assure that the dollars spent in Bradford County are being put to good use?” Back in June of 2006, the QAB passed this policy:

“Applicants will be responsible for maintaining a completed project. Failure to do so may be cause for the District to refuse future project requests until maintenance is performed.”

Concern for our installed projects has been even higher now with all the increased heavy use and road rebuilding related to the gas industry. This increased concern resulted in the Conservation District staff taking to the roads and visiting each and every one of our completed projects. We rated each site for the following items:

- Functional road shape / surface drainage
- Continued mitigation of water quality impacts
- Continued effectiveness of road drainage
- Proper maintenance of DSA
- Maintenance of original project practices
- Continued overall project function

So how did we do? Not too bad:
• For the vast majority of projects, they were looking good and still serving the objectives they were originally developed to meet.
• The review revealed that only seven of the sites were impacted by heavy truck traffic; and of those seven, three were adversely impacted.

The Bradford Conservation District plans to review completed projects every two years, and has recently enacted a policy requiring grant recipients to maintain projects to Dirt and Gravel Road standards for 10 years after completion.”

This “before and after” comparison from Pennsylvania’s Northern Tier demonstrates the effect even a single Marcellus well can have on a road. DSA was placed on this completed project in 2003. Yes, the truck is actually stuck in the ditch (not a setup).
Quality Assurance / Quality Control

What is Quality Assurance / Quality Control (QAQC)?

The QAQC process is designed to provide feedback and assistance to County Conservation Districts who administer PA’s Dirt and Gravel Road Program. The process involves a two-day visit from a QAQC team that includes representatives from the Program, Center, and DEP. The group looks at various aspects of the District’s Program such as administration, functionality, and project work in an effort to improve the Program at both the County and State level.

What is the timeline?

The first round of QAQC visits began in 2003 and finished visiting all 64 Districts involved in the Program by the end of 2009. Last winter, members of the Program’s “Policy and Planning” Advisory Group got together in an attempt to improve the QAQC process. The current plan is to get QAQC visits started in 2011, hopefully completing 2-3 visits by the end of the year. Next year, the QAQC visits should be in full swing with the potential to visit 10-12 individual Conservation Districts annually.

What has changed since the first round of QAQCs?

This second round of QAQC visits will:

- place more emphasis on looking at projects in the field.
- try to take care of some administrative details before the visit, and better inform the Districts of what the process will entail.
- focus on an interactive visit & learning experience over evaluations & scores.
- share strategies between Districts an focus on improving the entire Program.

New Program Allocations to Districts

Conservation Districts are reminded that the Program will begin a three year phasing-in of new District allocations in FY 2011-12. The new allocations utilize a revised formula and will include all ~16,600 worksites identified to date by Districts. The SCC approved the new allocations at their 5/17/11 meeting and Districts can expect to receive checks as usual in August/September (pending approval of the State budget). Details of the change, including allocation figures, are on the Center’s website at www.dirtandgravelroads.org.

Center Website Update

The Center is currently in the process of upgrading its website located at www.dirtandgravelroads.org. The website receives 700+ hits a month from all over the world. Look for the newly redesigned site to appear sometime in June. Some of the changes include:

- More separation of Program and Center resources:
  - Easy access to Program resources for those involved in the Program.
  - Easy access to Center resources and info for other entities.
- Page dedicated to the Center’s Marcellus efforts.
- Page dedicated to the Center’s trail-related efforts.
- More information: addition and expansion of several topics.
The two-day ESM training covers many aspects of road maintenance and focuses on practices to reduce maintenance costs and environmental impact from unpaved roads.

Have questions or want to schedule an ESM training? Want to receive future newsletters? Contact Kathy Moir at:
1-866-No-To-Mud (1-866-668-6683)
dirtandgravel@psu.edu
www.dirtandgravelroads.org

**Two-Day ESM Training Schedule**

- **Sullivan**: June 15-16
- **Franklin**: Oct 18-19
- **Columbia**: Nov 15-16

**Available**: Jul 12-14
(rescheduled form Feb.)
Fayette: Aug 16-17

*Contact the Center to register for a training, or to discuss hosting one (814-865-5355).*

**Other Events**

- **PACD meeting**: Jul 11-12: Joint Annual Meeting, State College
- **SCC meetings**: Jul 12th, St. College: September 13th, Hbg: November 15th, Hbg.

**2011 Dirt and Gravel Maintenance Workshop**: September 27-28, Wilkes-Barre, PA
Dirt and Gravel Road Maintenance Program

SUMMARY REPORT

PROGRAM BACKGROUND

Pennsylvania’s Dirt and Gravel Road Maintenance Program provides grant funding to local municipalities in order to eliminate stream pollution caused by runoff and sediment from unpaved roads. The Program was enacted into law in April 1997, as Section 9106 of the PA Vehicle Code, with $4 Million in annual funding for “environmentally sensitive road maintenance”. Each year, the State Conservation Commission allocates this “dedicated and earmarked funding”, based on identified need, to County Conservation Districts. Townships and other road-owning entities apply to their local Conservation District for these funds to address identified pollution problems using environmentally sound road maintenance practices. All grant applicants must have completed a 2-day training course entitled “Environmentally Sensitive Road Maintenance” focused on lowering maintenance costs and reducing stream pollution.

KEY FACTS about the Dirt and Gravel Road Maintenance Program:

- Stresses site-specific, long-term solutions to prevent erosion and pollution, instead of “band-aid” fixes.
- Reduces pollution while promoting sustainable unpaved roads. “Chip-sealing” or paving is not funded.
- Minimal administration; limited to 2% at the state level; limited to 10% at the local level.
- Emphasis on informed local control and environmental soundness puts decision-making at local level.
- Adherence to program values assured through central training, technical assistance, and quality control.
- 16,500 miles of public unpaved road (forestry roads not included) have been inspected.
- 16,600 “Worksites” where road runoff negatively impacts a stream are mapped and assessed.
- Uses a computerized GIS system used for project tracking and central reporting with minimal paperwork.

2010 STATUS

The map below illustrates all of the Program’s 16,600 identified “Worksites”. These worksites are identified pollution sources PA waters and are the only locations eligible for Program funding. Approximately 2,300 separate contracts have been funded on 2,100 sites to date.

All information based on reports submitted by individual County Conservation Districts.

www.dirtandgravelroads.org

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**2010 Program Spending**

Approximately $3 Million per year is spent on “on the ground” project work since the Program began in 1997. In-kind contributions are money or services that are contributed from sources outside the Program. In-kind contributions have increased dramatically over the past five years. One reason is because many counties are trying to “stretch” the limited funds they have by requiring or rewarding projects with high “in-kind” matches from participants. Another factor in recent years has been that many Districts are supplementing their Programs by using outside funding such as Federal Stimulus funds, Growing Greener grants, etc.

**PROGRAM SPENDING**

Since 1997, the Program has spent $38.3 Million on “on-the-ground” projects. The graph below illustrates the breakdown of that money into the categories of “materials”, “equipment”, and “labor”.

**IN-KIND CONTRIBUTIONS**

Since 1997, the Program has received $17.1 Million in “in-kind” contributions, mostly from townships. “Other” in the graph below refers mostly to outside grants used to fund Dirt and Gravel Projects.

**MARCELLUS: A Challenging “Road” Ahead**

The development of PA’s shale gas is in full swing and will likely last for decades to come. While bumpy roads and traffic delays have received their fair share of press, little is reported on the environmental impacts of these damaged and dysfunctional roads. Those impacts, however, are real and have increased the overall “need” of the Dirt and Gravel Road Program, whose ~$50 Million in spending on completed road projects is in jeopardy. Some of the practices being used by gas companies to address roads, while well intentioned, are damaging previously completed projects and are counter to the Program’s philosophies of drainage disconnection, encouraging infiltration, and reducing sediment pollution to PA’s streams. The Program is pursuing a cooperative approach to addressing these issues with those in the gas industry. The initiative is gaining momentum, but needs greater support from state and local agencies in order to make an impact on the large number of roads being reconstructed.