Driving Surface Aggregate (DSA) has been approved by PENNDOT for purchase with Liquid Fuel Funds.

The Dirt and Gravel Road Program has recently received a “shot in the arm” with PENNDOT’s approval of DSA for purchase using Liquid Fuels Funds. Liquid Fuels Funds are administered by PENNDOT’s Bureau of Municipal Services and allocated to Pennsylvania’s municipalities for road maintenance. Over $300 Million in Liquid Fuels money is distributed to municipalities each year. Townships and other municipalities use Liquid Fuel Funds as their primary maintenance budget for ALL of their roads. With PENNDOT’s recent approval, municipalities can now use this money to purchase DSA.

PENNDOT developed its Driving Surface Aggregate specification based on the DSA used by the Dirt and Gravel Road Program. PENNDOT’s publication 447 (MS-0450-0004) is included in this newsletter as an insert. The only major change in the DSA specification is as follows:

“Place the (DSA) to a minimum un-compacted depth of 6” and a maximum un-compacted depth of 8” in one lift”

The previous policy of the Dirt and Gravel Road Program has been that DSA be placed at an un-compacted depth of 8”. In November of 2006, the State Conservation Commission took action to accept the PENNDOT specification that providing a range of aggregate placement depths. County Quality Assurance Boards (QABs) are free to require specific placement depths when using Dirt and Gravel Road Funds.

What is DSA?

New to the Dirt and Gravel Road Program and confused by all this DSA talk? DSA is an aggregate specification specifically designed for use as a surface wearing course for unpaved roads. It is designed to achieve maximum compaction and resist erosion. For more information, look under “Resources>DSA” on the Center’s website at: www.dirtandgravelroads.org.
Q: Now that DSA is eligible for purchase under Liquid Fuels, can DSA still be purchased using Dirt and Gravel Road Funds?
A: Yes. The economic and environmental benefits of DSA have not changed.

Q: Should DSA still be placed using a motor-paver?
A: Yes. Although not a requirement, placing DSA with a motor-paver has always been recommended by the Program to prevent particle size segregation.

Q: Should DSA be placed at 8 inches compacted to 6, or 6 inches compacted to 4½?
A: The Dirt and Gravel Road Maintenance Program was founded on the principle of local control. While the State minimum placement depth is now 6” compacted to 4½”, County Quality Assurance Boards (QABs) may choose to specify a thicker placement depth when using Dirt and Gravel Road funding. Individual projects can be placed at either depth. Factors such as traffic volume, traffic weight, and available budgets play a role in determining aggregate depth. 8” aggregate placements will provide more material to rework into the road over time, while 6” placements will allow a longer length of road to be surfaced with limited funds.

Q: Can a Dirt and Gravel Road grant share the cost of DSA with the applying township?
A: Yes. Townships may use Liquid Fuel Funds to pay for some or all of the aggregate on Dirt and Gravel Road projects. The money spent by the township on DSA would be considered an in-kind contribution, just like any other expense the township incurs for the project. Make sure the supplier uses the Program's DSA certification sheet when paying for aggregate with Program money. PENNDOT has a separate certification (Form MS-4171).

Q: Does DSA have to be Limestone?
A: No. Parent material is not specified in the DSA specification. Any aggregate material that meets all the specifications for DSA can be used.

Q: Is DSA required on all Dirt and Gravel Road projects?
A: No. The original purpose of using DSA has always been to harden the road surface in locations where runoff to a stream was unavoidable. DSA was never intended to be used on all project sites. DSA has often been the "carrot" or reward that encourages a township to participate in the program, but it is NOT required on any site by the Program. Besides, what better way is there to cut project costs and complete more drainage improvements than to reduce the amount of DSA purchased with Dirt and Gravel Road Program funds.
Q: **Can other aggregates be used as surface material?**
A: Not if the aggregate is paid for with Dirt and Gravel Road Funds. If your project includes surface aggregate that is purchased with Dirt and Gravel Road Program funds, only DSA can be used.

Q: **Is separation fabric required on Dirt and Gravel Road Projects?**
A: No. Fabric is useful to stabilize roads in certain wet situations. Separation fabric is a useful tool, but like any tool, has certain situations where it is best suited. Fabric is most useful in very wet locations. When a roadbed is constantly wet, traffic and weather act as a pump to move water up and down through the road. This water promotes mixing of the aggregate and base layer. This effect is most pronounced in areas with clayey soil or sub-base. Separation fabric in these areas will allow water to pump naturally, but will keep road aggregate separate from the sub-base. The use of fabric on all sites is costly and unnecessary.

Q: **Is the application of dust suppressants required on Dirt and Gravel Road Projects?**
A: No. The Dirt and Gravel Road Program was created with an emphasis on permanent solutions to sediment pollution instead of temporary fixes. The main concern with the application of dust suppressants is this: all dust suppressants are temporary. Consider the “pollution reduction per dollar” factor of dust suppressants when compared to other practices such as adding crosspipes, stabilizing ditches, and other drainage control techniques. Some additional benefit may be achieved by mixing products as stabilizers into the aggregate, rather than as a traditional top coating. As with many other aspects of this Program, funding decisions regarding the use of dust suppressants remains in the hands of local QABs.

Q: **Has anything other than placement depth changed?**
A: No. Only the range of placement depths has changed. Other factors such as hardness, sieve sizes, pH, etc. remain the same.

We hope that approval of DSA by PENNDOT will lead to increased availability; improved consistency; and reduced cost. DSA’s approval also represents a large potential increase of in-kind contributions from project applicants since new funding sources may now be available. Detailed DSA specifications and contact info can be found at: www.dirtandgravelroads.org.
Important Considerations

Questions about regional trainings? Want to schedule an ESM training in your county?

Contact Kathy Moir at CDGRS:
1-866-No-To-Mud
(1-866-668-6683)
e-mail: dirtandgravel@psu.edu
Web: www.dirtandgravelroads.org

2007 2-Day ESM Training Schedule

<table>
<thead>
<tr>
<th>County</th>
<th>Date</th>
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<tbody>
<tr>
<td>McKean County</td>
<td>March 6 &amp; 7</td>
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<tr>
<td>Bradford County</td>
<td>April 3 &amp; 4</td>
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<tr>
<td>Venango / Forest</td>
<td>May 2 &amp; 3</td>
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<tr>
<td>Westmoreland County</td>
<td>May 30 &amp; 31</td>
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<tr>
<td>Clarion / Armstrong</td>
<td>June 26 &amp; 27</td>
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<tr>
<td>Lackawanna County</td>
<td>August 21 &amp; 22</td>
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<tr>
<td>Schuylkill County</td>
<td>October 9 &amp; 10</td>
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<tr>
<td>Fulton County</td>
<td>November 7 &amp; 8</td>
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Other Events

Assessment Trainings: Late Spring 2007 – look for details soon.

PSATS Annual Convention: Hershey, April 22 - 25.

2007 Dirt and Gravel Road Maintenance Workshop: Tannersville, September 10-12.

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