



**PERMITTING AND COMPLIANCE DIVISION
WASTE AND UNDERGROUND TANK MANAGEMENT BUREAU
SOLID WASTE SECTION**

PHONE: 406/ 444-5300 FAX: 406/ 444-1374

August 2015

GUIDANCE ON WASTE ASPHALT RECYCLING, REUSE OR DISPOSAL

The current Montana Department of Environmental Quality's Solid Waste Program (SWP) regulations identify waste asphalt as a Group IV non-hazardous solid waste (see the Administrative Rules of Montana (ARM) 17.50.503(1)(c)). When waste asphalt is destined for disposal, it is considered a non-inert material and must be disposed of in a licensed Class II or Class IV landfill. Disposal of waste asphalt in a Class III landfill, reserved for inert materials only, is prohibited. In addition, waste asphalt may not be used as clean fill. [Clean fill is defined in ARM 17.50.502(4)]. The use of waste asphalt generated from off-site sources as backfill material for mine or gravel pit reclamation is also prohibited, unless the site is licensed as a Class IV solid waste management system. Although the waste asphalt cannot be used as clean fill, DEQ does support beneficial reuse of the waste asphalt. This guidance document is intended to describe acceptable beneficial reuse and acceptable interim storage between time of waste generation and time of beneficial reuse. If acceptable beneficial use cannot be established, waste asphalt must be disposed of in a licensed Class II or Class IV landfill. Digging a trench or pit solely to dispose of the material is prohibited.

The SWP encourages the diversion and beneficial reuse of waste asphalt materials whenever possible and appropriate. Since a large majority of waste asphalt is generated as asphalt millings from road construction projects, the preferred method of reuse involves the incorporation of the waste asphalt into the new asphalt road surface as recycled asphalt plant mix (RAP).. For reasons such as age, type, or condition of the existing asphalt, this option is not always feasible. Waste asphalt may also be transported and stockpiled offsite and then reused in an asphalt batch plant to produce RAP at a later date.

An alternative method of reuse recognized by the SWP allows for the incorporation of milled or crushed waste asphalt into the compacted roadway prism, including embankment backfill and/or road base material. Waste asphalt proposed for reuse in this manner must be sized to meet the appropriate engineering specifications for the project (State, Federal, and/or County road

construction standards). This sizing requirement applies regardless of where in the roadway prism the milled or crushed asphalt is being used (e.g. subgrade, base course, sub-excavations, or compacted roadway surface). For waste asphalt reuse that does not have specific minimum design standards or specifications, the SWP requires that these types of projects conform to the most recent edition of the Montana Department of Transportation's (MDT) "*Standard and Supplemental Specifications for Road and Bridge Construction.*" According to MDT's specifications, existing crushed and milled pavement used as foundational road material within the roadway prism must conform to maximum lift thickness placements (8-inches), optimum moisture content, size requirements and minimum density criteria. Foundational base course layers may integrate up to 50% asphalt millings (by weight) uniformly blended with other suitable existing or virgin aggregates. Pulverized waste asphalt should be processed by blending in a uniform manner that meets all construction specifications.

Waste asphalt that is used as foundational road material or subgrade must be overlain with compacted material and/or sufficient topsoil that promotes vegetation and minimizes the migration of water through the asphalt product. The material must be properly sloped to generally promote run-off.

Because asphalt is a degradable material, it must not be placed in a position where it could be saturated or affected by fluctuating ground water levels. Use of the material in the foundation of a road must consider seasonal ground water fluctuations and must be located to ensure waste asphalt is above the highest anticipated seasonal saturation level of the foundation. Do not place material in ephemeral drainages or within 100 feet of standing water or groundwater wells.

The reuse of waste asphalt as foundational road material, subgrade, or compacted driving surface is considered to be beneficial use. When used as a driving surface the best results will be obtained if the material is used and placed immediately upon being generated (milled) with the surface being compacted, and treated with a rejuvenating agent, and/or chip sealed application. Other approved beneficial reuses of the compacted material include: paved parking and storage areas; foundational support behind guardrails; paved pullouts (e.g., mailbox pullouts, approaches); traffic gravel, County roads, and/or temporary construction roads; and pavement for drainage ditches used to convey stormwater. Such reuse is not considered to be disposal, because the compaction of the millings, treatment of the millings, and/or the replacement asphalt road surface will seal the subsurface materials and minimize percolation of water .

Past experience demonstrates that waste asphalt not used within a short time frame tends to set up in stockpiles and becomes difficult to use in a beneficial manner. However, the SWP recognizes that the highest and best reuse of the material may be facilitated by the ability to temporarily store the material off the project location where the waste material was originally

generated. This temporary storage allows the greatest opportunity to reuse the material in a beneficial manner at a different location and later time. Any waste asphalt intended for beneficial reuse that needs to be stockpiled for a period of time greater than 6 months should first be crushed or milled. If intended to be used in future pavement, waste asphalt should be located near a hot plant or other mechanism capable of recycling the waste asphalt stockpile. The stockpile must be placed in an environmentally sound location that is not subject to ponding of water and will not potentially degrade surrounding waters or soils by runoff; as a result, best management practices may be necessary to control runoff from the stockpiles.

Every effort should be made to plan for the beneficial reuse of the waste asphalt during the planning stages of the project. If no immediate reuse options are utilized during the construction project, the owner of the milled waste asphalt material must submit notification to SWP regarding the location of the material and the intent to temporarily store and subsequently beneficially reuse the material. This notification will aid the SWP in evaluating stockpile locations and ensuring that the stockpiled material is either beneficially reused or disposed of in accordance with solid waste regulations.

DEQ will continue to work with other state agencies and research groups in order to qualify potential environmental risks associated with asphalt wastes and to develop sound reuse and/or disposal options. If you have any questions or comments concerning this guidance, please feel free to call or write the Solid Waste Section.