TRACK OUT REDUCTION:
Wheel Washing Options

Iowa Storm Water Education Program

iowastormwater.org

Latest Technologies

Did you know...

○ **Tracking of sediment onto streets can cause public safety issues and water and air pollution.**

○ **This can result in the discharge of sediment-laden water with high turbidity to nearby storm drains that discharge directly to waterbodies.**

○ **Sediment can impact fish and other aquatic life.**

○ **Low-cost wheel washes can minimize tracking of sediment onto public roads.**

Construction sites and also industries such as quarries, ready mix plants, landfills and others are using wheel washes to prevent track-out of mud, dust and sediment onto public roads. These practices also help reduce the amount of airborne fine dust particulates.

Several states now require that wheel washes be used at select construction sites and industries.

Wheel wash options include: basins, channels, low pressure inundation and low and high pressure cleaning.

A low pressure tire wash cleaning system *(Mark Kestner).*

High Pressure Cleaning

This process uses water pressures of >150 psi. Water consumption can range from 40 to 100 gallons per truck depending on how fast the truck moves through the wash. The system consists of a pump, surge tank and vertical spray nozzle manifolds. Relatively clean water is needed due to the abrasive effects of sediment. Pumps and nozzles wear out more quickly. It washes tires and mud flaps in a small area with low water consumption. Nozzles can plug and sensors and other controls are required for operation.

A high pressure spray tire wash cleaning system *(Mark Kestner).*

Low Pressure Cleaning

Low pressure washes tires, mud flaps, and under carriages using large amounts of low pressure (<150 psi) water. Water consumption ranges from 1000 to 3000 gallons per truck. A large reservoir is needed for the high volumes of water. The spray wash is combined with a rumble grate. A catch basin is used to collect and then treat wash water. A small area is needed. Water consumption is high, nozzles can plug and sensors are required for operation.

Keep sediment and airborne particulates off of the streets and out of the air.

Providing educational resources statewide to communities and other groups to inform and educate local stakeholders.

**Iowa Storm Water Education Program**

Wash Basins

Basins are the simplest system to use at most sites. They typically consist of a shallow excavated basin that is long enough to allow all vehicle tires to rotate and be washed in the basin. Lengths range from 20 to 60 feet depending on the size of the trucks and usually contain gravel or rock. Rumble gates are often used in combination with the basin to increase tire agitation. Fresh water needs to be supplied to the basin to flush out the dirty water that needs to be collected and treated. This is a low cost option that is in continuous operation and requires no nozzles and sensors. They require daily cleaning and don't reach mud flaps and wheel wells easily. An area >1,000 ft^2 is usually needed for most basins.

Wash basin used for wheel washing. Note the rumble gate for added tire agitation and rock (Mark Kestner).

Channel Washes

Channel washes are also a simple system to use at most sites. They consist of long, shallow, inclined channel basins, one each for the left and right sides of a vehicle. Water is flushed in the channel countercurrent to traffic. They are usually 100-300 feet long requiring a large area. Waste washwater drains to a sump for collection and treatment. They are used in combination with rumble strips and rock or gravel for additional tire agitation. They are a low cost option that requires no nozzles or sensors. They require daily cleaning and don't clean mud flaps and wheel wells.
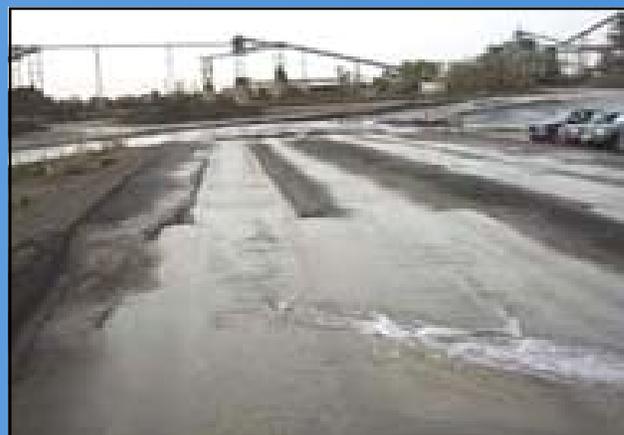
A wheel wash with channels, one each for left and right sides of a vehicle (Mark Kestner).

<u>**Commercially Available Wheel Washes**</u>

Neptune: www.innovativeequipment.org/

Moby Dick: www.mobydick.comhttp:/

Stanton: www.stantonsystems.com/

NESCO: www.drdust.com/wheelwash.htm

Please do your part to protect Iowa's streams and lakes!

Iowa
Storm
Water
Education
Program