

Q: WHAT CAUSES THE “WASHBOARD” EFFECTS ON THE ROADS? A: The major cause is vehicle acceleration and braking on curves and/or hills. This can result in a different rate of soil compaction which leads to surface distortion. Lower, more compact valley, and higher less compact ridges result as tires slip and bounce on the road surface. Vehicle weight is also a factor. Heavy vehicles and higher traffic volumes cause more damage. Washboarding can even occur on paved roads if the right grade conditions exist.

Q: WHAT ARE THE OPTIONS FOR FIXING WASHBOARDS IN OUR AREA? A: It is very difficult to “fix” washboarding. Once present, differential soil compaction can extend well below grade. Even after the surface of the road is bladed smooth, the washboarding often returns quickly. In order to reduce the problem, the entire road profile usually needs to be changed. A section of road often needs to be redesigned and reconstructed. As more people move into the neighborhood, we can expect, higher volumes of traffic and more extensive washboarding problems.

Q: WHAT CAN BE DONE TO PREVENT WASHBOARDS? A: Slower speeds of travel and gentle braking can lessen the extent of the washboarding. Driving more slowly will also make the ride considerably more comfortable. Washboarding can also be exacerbated by non-resident traffic, (i.e., construction vehicles that often carry heavy loads, and larger delivery trucks traveling at higher speeds).

Q: WHY DO DURABLEND APPLICATIONS WORK IN SOME AREAS BUT NOT OTHERS? A: Durablend and Magnesium Chloride, were originally developed to be used as a dust control measure. They are designed to “bind” the small particle aggregates and sand near the road surface. The penetration rate is approximately ¼ inch during the application. After several separate applications, road blading and re-grading, these products can be present deeper in the road and can help “stabilize” a road by providing some minimal binding below the surface. Because Durablend only binds very small particles (sand, etc.), it can work better on some portions of the road where the smaller materials are present at the surface. Steeper grades and curves do not bind as well because there is more stress on the surface materials. Durablend or Magnesium Chloride are poor substitutes for a well-designed road base with a mix of aggregates and natural binders, such as clay.

Q: WHAT DOES IT MEAN TO “CROWN” THE ROAD AND “PULL” THE DITCHES? A: This technique is routinely performed on gravel and dirt roads. The material that accumulates in the ditches, from weather related runoff and traffic on the roads, is pulled out and redistributed on the road surface. A grader is then used to blend the “pulled material” into the existing road base materials. A “crown” is built up in the center of the road so that the road slopes toward the road shoulder and allows rainwater and snow melt to drain back into the ditches. Road crown slopes are typically between 2% and 6%. The Road Task Force Report provides detailed information about these design issues and maintenance processes.

Q: IS “CROWNING” AND “PULLING” DONE IN GAME TRAIL, AND IF SO, WHY DOESN'T IT WORK AS WELL AS IT DOES IN THE MIDWEST? A: Attempts are always made to crown the roads and reclaim materials. However, current Game Trail road base materials have a high sand content and do not have the natural clay binders typically found in the materials used in some other parts of the country. Game Trail soils also lack the quantity of larger aggregates that can be helpful in maintaining good quality roads. Steep grades and curves make road maintenance more challenging. The Commons Committee is currently working with Miles construction to identify better road base material options in our area and test these options on Game Trail roads. With better materials we may be able to provide more effecting “crowning and pulling”. The Road Task Force Report provides detailed information about these on-going processes.

Q: WHAT IS A WATERBAR? A: A water bar is a constructed feature used to convey water from a ditch on one side of a road to the other side of the road, instead of using a culvert. A Waterbar is a swale (round bottom low point) and a parallel hump that runs across a roadway at an angle. This is a way of moving water from one side of the road to another in places where a culvert cannot be installed. There are a few locations in Game Trail where a Waterbar MAY be effective, and it also helps reduce vehicle speeds! A Waterbar is typically used on low volume, low speed, forest service roads.

Q: WHAT IS RIPRAP? A: Riprap is rock of various sizes (typically 6" to 12" in size) that is placed in areas of expected erosion to hold the soil (dirt) in place. Riprap is usually used at culvert entrances and exits, on steep slopes, or steep ditches.

Q: WHAT CONDITIONS ARE REQUIRED BEFORE THE ROADS CAN BE EFFECTIVELY GRADED? A: Moisture is required to blade and regrade the roads. Without moisture the road grader cannot remove the road base materials in a uniform manner.

Q: WHAT BINDER IS AVAILABLE TO USE ON GAME TRAIL ROADS? A: Durablend, and magnesium chloride are available for dust control and will provide some binding at the surface of the road. The Commons Committee is currently working with Miles Construction to identify road base material options which have better natural binding characteristics. The Road Task Force Report provides detailed information about these on-going processes.

Q: HOW MUCH MOISTURE IS NEEDED TO WORK ON GAME TRAIL ROADS EFFECTIVELY? A: The amount of moisture required depends on the existing weather patterns. Long periods of drought dry out the roads and large amounts of water are required to perform road maintenance. Eight to twelve thousand gallons of water per mile is the typical minimum requirement during dry conditions. Steady moisture from weather events and warm daytime temperatures are ideal because they allow the moisture to seep into the ground and make the soil easier to manipulate. If no weather pattern moisture is available, water must be purchased from an outside source and trucked in. Roads cannot be graded when frozen.

Q: WHAT ARE THE ROAD PLANS FOR THIS YEAR? A: The Commons Committee works with Miles Construction to plan and schedule road work in Game Trail. The Road Task Force Report provides detailed information about current and future road work in Game Trail.