

## PRODUCTS EVALUATION

<b>Compost Blanket &amp; Berm</b>	<b>By: Fred Cheng</b> <b>On: February 28, 2007</b>
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### **Project Background:**

Hwy 734:22 runs closely along Pembina River at a number of locations and bank erosion of various degrees is quite common. Repair work has been planned for locations where bank erosion is affecting the integrity of the highway. Bio-engineering and bio-technical techniques, as well as conventional and new erosion control BMPs such as rolled erosion control products and compost, will be used. A three-day course to provide both theoretical and hand-on training in bio-engineering and bio-technical techniques will also be introduced during the repair works.

### **Inspections:**

June 1, 2005 - A number of erosion sites along H734:22 was inspected as part of an annual inspection tour. Prioritized sites, such as Sites 1, 9, and 8 were identified for repair work. It was determined that Sites 1 and 9 are prime candidates for remediation for 2006 and Site 8 for 2007. Thurber is the prime consultant designing and administering the projects and John McCullah of Salix Applied Earthcare the sub-consultant reviewing the bio-engineering design and delivering the classroom and field training. Site 8 will be remediated using the same design and delivery format as in 2007.

June 6, 2006 - Sites 1 and 9 were inspected. Grass has started to catch on slopes, flat surfaces, berms and places where compost has been applied. There is no visible erosion of major concern in these areas even after major rainfall, resultant high water and flooding during Spring.

June 28, 2006 - During the Annual Inspection many sites including Sites 1 and 9 were inspected. Grass catch has improved and no erosion is visible in the composted areas.

### **Application:**

Compost was applied by Top Spray of Cochrane. Compost is mixed with seed and a tackifier and blown onto a surface to a thickness of about 2". There are 2 kinds of berms used - compost blown into a sock (Filtrexx Soxx) and directly applied using a berm applicator. Compost provides nutrients for seed to germinate and grass to grow while retaining moisture and slowing down runoff. Compost is also applied on slope ditches where branches are planted (Site 8 in 2006).

### **Recommendations:**

Compost intimately conforms to the topography and fills cracks and rills. Compost is a viable, nutritional, economical and environmentally friendly growth media that is supportive of speedy vegetative growth. Compost is accepted as a Best Management Practice and it has been placed on the AIT Approved Products List. Continual monitoring of compost sites is recommended.

June 1, 2005 - Site 1 (before remediation work):



June 1, 2005 - Site 9 (before remediation work):







September 28, 2005 - Site 1 – Construction and 1<sup>st</sup> Bio-engineering course:



Compost application on slope



Compost application



Compost blanket and Fitrex berm



Compost application





Fitrex soxx



Compost berm

June 6, 2006 - Site 1:



Grass is catching in compost blanket



Compost berm



Compost berm





June 6, 2006 - Site 9:



Grass catch on compost blanket



Grass catch along the guardrail



Truck parked on composted area

June 28, 2006 - Site 1:



Compost blanket on slope and berm on road side





June 28, 2006 - Site 9:



Grass catch on composted slope



Grass catch on compost slope

September 28, 2006 - Site 8 - Construction and 2<sup>nd</sup> Bio-engineering course:



Compost blanket



Compost berm alongside steep highway





Compost berm along a ditch



Compost



Compost applied on slope



Compost berm applicator



Compost berm





September 28, 2006 - Site 1:



Good catch of grass



Good grass catch and willow growth



Good grass and willow growth







Good grass and willow growth



Very good grass growth



Good grass and willow growth

