












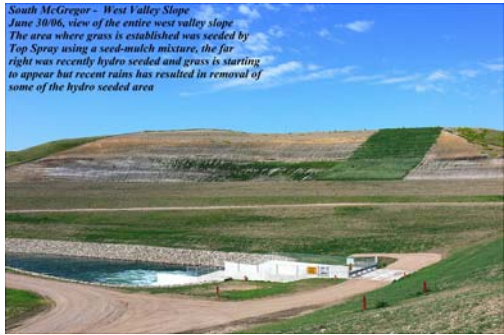
Application of Erosion and Sediment Control Best Management Practices (BMPs) on Alberta Highways (Before-After Installations)
Updated April 2008

BMP	BEFORE	AFTER
Cellular Confinement System (BMP 15)	 <p align="center">H841:02 Deep and severe erosion of roadside ditch to form gullies</p>	 <p align="center">H841:02 Backfilling of gullies and installing geocells filled with sand</p>
Cellular Confinement System (BMP 15)	 <p align="center">H837:02 Deep erosion of roadside ditch</p>	 <p align="center">H837:02 Backfilling of ditch and installing a combination of sand filled geocells and gabion structures</p>
Rolled Erosion Control Blankets (BMP 13)	 <p align="center">H63:12 Supertest Hill (Ft McMurray) Deep gullies forming on lower slope, downslope side of service road</p>	 <p align="center">H63:12 Supertest Hill (Ft McMurray) Deep gullies were backfilled and straw blankets installed on top to promote grass growth</p>







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BMP	BEFORE	AFTER
<p>Rolled Erosion Control Blankets (BMP 13)</p>	 <p>H63:12 Supertest Hill (Ft McMurray) Shallow gullies forming on sideslope on the far right (looking south)</p>	 <p>H63:12 Supertest Hill (Ft McMurray) Gullies were backfilled and straw blankets installed to promote grass growth (looking north; green patch is where the power post is)</p>
<p>Stilling Basin (BMP 18)</p>	 <p>H63:12 Supertest Hill (Ft McMurray) Stilling basin preparation at twin culvert inlet</p>	 <p>H63:12 Supertest Hill (Ft McMurray) Stilling basin constructed of gabion baskets</p>
<p>Riprap Armouring (Channel Application) (BMP 14)</p>	 <p>H986:01 Daishowa East Hill Erosion of ditch and dislodgement of subterranean drain pipe (looking north)</p>	 <p>H986:01 Daishowa East Hill Rebuilding ditch with a rock-lined and gabion channel (looking south)</p>







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BMP	BEFORE	AFTER
<p>Gabion Wall (BMP 2)</p>	 <p>H11:08 Rocky Mountain House Poor construction of gabion wall resulting in failure</p>	 <p>H11:08 Rocky Mountain House Rebuilt of failed gabion wall</p>
<p>Hydroseeding (BMP 24) Rolled Erosion Control Blankets – TRM (BMP 13)</p>	 <p>H63:12 Supertest Hill (Ft McMurray) Erosion of sideslope ditch</p>	 <p>H63:12 Supertest Hill (Ft McMurray) Ditch was shaped and a permanent TRM was installed</p>
<p>Compost Blanket and Berms</p>	<p>McGregor Reservoir - South Dam Outlet System January 30/06, West slope seeding, the mulch - seed mixture installed by Top Spray continues to become depleted by wind erosion, looking towards the top of the slope</p>  <p>H529:04 McGregor Reservoir South Dam West Slope Close-up view of a 30 m compost treated strip</p>	<p>South McGregor - West Valley Slope June 30/06, view of the entire west valley slope. The area where grass is established was seeded by Top Spray using a seed-mulch mixture, the far right was recently hydro seeded and grass is starting to appear but recent rains has resulted in removal of some of the hydro seeded area</p>  <p>H529:04 McGregor Reservoir South Dam West Slope View of plush green compost treated strip compared to rest of untreated slope one winter later</p>







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<p>RECP - Coir Matting and Rock Check Ditch (BMP 13)</p>	 <p align="center">H501:00 Beaser Road After installation</p>	 <p align="center">H501:00 Beaser Road One year later</p>
<p>Soil Nailing, Shotcreting, Wire Netting and TRM</p>	 <p align="center">H11:04 Abraham Lake</p>	 <p align="center">H11:04 Abraham Lake Soil Nailing</p>
<p>Soil Nailing, Shotcreting and TRM</p>	 <p align="center">H11:04 Abraham Lake</p>	 <p align="center">H11:04 Abraham Lake Soil Nailing and Shotcreting</p>

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Pillow Concrete Mattress, Cable Concrete Mattress, ChannelSoxx, Canal Liner, gabion mattress, TRM, Interlocking Concrete Blocks, Cellular Confinement System	 <p data-bbox="492 695 963 745">H986:01 Daishowa East Slope Test Site Severe erosion of south ditch</p>	 <p data-bbox="1040 695 1511 745">H986:01 Daishowa East Slope Test Site ChannelSoxx</p>
Pillow Concrete Mattress, Cable Concrete Mattress, ChannelSoxx, Canal Liner, gabion mattress, TRM, Interlocking Concrete Blocks, Cellular Confinement System	 <p data-bbox="492 1157 963 1207">H986:01 Daishowa East Slope Test Site Severe erosion of south ditch</p>	 <p data-bbox="1040 1157 1511 1207">H986:01 Daishowa East Slope Test Site Gabion Mattress and Geoweb</p>
Pillow Concrete Mattress, Cable Concrete Mattress, ChannelSoxx, Canal Liner, gabion mattress, TRM, Interlocking Concrete Blocks, Cellular Confinement System	 <p data-bbox="492 1619 963 1669">H986:01 Daishowa East Slope Test Site Severe erosion of south ditch</p>	 <p data-bbox="1040 1619 1511 1669">H986:01 Daishowa East Slope Test Site Pillow Concrete Mattress</p>

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<p>Bio-engineering Rock vanes, live stake, compost blanket, rock toe, root w, live siltation, RECP</p>	 <p align="center">H734:22 Pembina River Streambank Stabilization, Site 9</p>	 <p align="center">H734:22 Pembina River Streambank Stabilization, Site 9</p>
<p>Bio-engineering Rock vanes, live stake, compost blanket, rock toe, brush mattress, bent pole, vegetated mechanical stabilized earth, branch layering, live siltation, compost berm and blanket, RECP</p>	 <p align="center">H734:22 Pembina River Streambank Stabilization, Site 1</p>	 <p align="center">H734:22 Pembina River Streambank Stabilization, Site 1</p>
<p>Compost Filtrexx EdgeSaver and Riprap</p>	 <p align="center">H53:04 Ditch erosion</p>	 <p align="center">H53:04 Ditch erosion Filtrexx EdgeSaver and Riprap</p>