# Ruksznis/Deane Erosion Control


***Ruksznis and Deane family members***

**Conservation Practice Standards:** Access Road Code 560
Forest Trails and Landings Code 655

**Location:**
Piscataquis County, ME

**USDA Service Center, NRCS**
1073 West Main St., Suite 7, Dover-Foxcroft ME 04426
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**Multiple Use Forest** 900 Acres

Original partners who owned this land were the late Edgar Boardway and Kenneth Tripp, along with Austin Deane and Paul Ruksznis. Most of the management now has passed down to the next generation, Brad, Pete, and Ryan Deane and Tom and Frank Ruksznis. "Originally we did this for hunting, " said Frank Ruksznis. As the sons realized the importance of property and wildlife management, the goals widened to include Best Management Practices in forestry and wildlife. Professional occupations of the sons include logging technology and forest resources. On days off from regular occupations members of these families get together to do timber stand improvement, to seed a field to clover for wildlife, or to enjoy game hunting. An old 19th Century farm house serves as a hunting lodge and a place for get-togethers.

**Site Condition:** The soils are glacial tills that range from deep well-drained to poorly-drained and are stony. Before building an access road an abandoned town road had partly grown over with trees. It had eroded to the point where it served as a deep channel for water runoff.

**Machine Belts Divert Runoff:** Where once the eroded landscape stood, the owners built three-fifths of a mile of access road with water-bars, culverts, and grassed waterway. In addition to these practices they have used discarded machine belts from local mills to divert surface runoff that may flow down the road. They bury about 1 foot of the belt's width vertically across the road surface leaving 4 to 6 inches sticking up vertically. The above-ground part of the belt lies down as traffic passes over it, but flips back into upright position. Belts are laid at a 30-degree angle to the cross section of the road.

***Machine belt erosion control on access road.***

**Effects:** After three years of having the belts in place, there is no sign of erosion on the road surface. On the area immediately near Pingree Center Stream the slope is about 18 percent. Before the use of belts that section of road eroded continually.

"No matter how well a road is crowned, one trip driving over it in a wet season, even with a light vehicle, will create inch deep impressions," said Tom Ruksznis. These impressions provide channels for water to run. As it runs it carries sediments which eventually deposit at a down slope site. In this case the down slope site is Pingree Center Stream which flows into a great pond and from there drains into the Piscataquis River. The belts keep road sediment from reaching the stream. Sediment collected behind the belts show how effective they are.

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**Durability:**
A tractor trailer hauled over this road for three or four months in the summer of 2002 and the belts are still in good condition. Snowmobiles also traveled this road both winters.

**Installation:** There needs to be three people to install. Dig a trench, and while a couple of people hold the belt in place the third person with equipment pushes soil over the bottom part of the belt. Bury at least 12 inches, and have from 4 to 6 inches above the road surface. More than this will not stand upright and will rub on vehicular traffic. If the road is crowned 4 inches and only 4 inches of belt is desired above the surface, then the belt can be cut to make it fit the shape of the road's cross section. A thick belt that is rigid works the best.

This installation of one belt took from 20-30 minutes to install using an excavator at the rate of $65 per hour, plus two men to place and hold the belt while the machine buried it.

**Maintenance:** Some corners of the belt fold down a little in time. A few minutes with a pick axe and shovel will quickly restore the belt corners to an upright position. Sediment collected behind the belts needs to be removed when it has built up over a period of time.