Stone: A Resource with Implications for Communities, the Economy and the Environment

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The stone resource plays a vital role in Nova Scotia's economy and has important implications for the future. Consisting of aggregate and other specialty stone products, these basic bulk materials are used in all aspects of construction, infrastructure and the protection of land and communities. More than 7 Mt of stone are used annually in the province for a myriad of applications such road base, fill, concrete, asphalt, erosion control, septic fields, traction sand and children's playgrounds. Currently 4 million tonnes of stone are exported to locations along the U. S. eastern seaboard, the Gulf States and the Caribbean. Collectively the industry is thriving and an important employer throughout the province. This stable industry is particularly important to our rural economy, which depends on the resource sectors for jobs and tax revenues.

Although the industry is doing well, the stone resource is struggling. This reflects decades of economic growth and infrastructure development, which are placing pressure on the aggregate deposits (7 Mt each year). At the same time that stone reserves are diminishing, it is becoming more difficult to find new deposits and establish new extraction operations. Sprawling populations, competing land uses, environmental regulations, rigid materials standards and opposition to mining have all contributed to the reduction of high quality resource land. Land that seems safe for resource development now may also come under pressure for alternative uses or sterilization in the future. By way of example, three decades ago it would have been difficult to predict today's passionate interest in protecting land for recreational development and hiking trails. This single land use, which tends to focus on the remote areas that are also desirable for quarrying, has had a serious impact on the future use of isolated land blocks for extraction purposes. Another example is the recent proliferation of wind farms, which commonly compete for the same valuable uplands that can be used for the production of high quality aggregate.

Collectively these issues are placing pressure on the resource land and new operations are continually being forced farther away from the markets they serve. Because haulage costs for the stone are the largest component in the landed price of the stone, the cost of stone is rising, which will have negative implications for users in the future. The impacts will include increased costs for public infrastructure and all types of construction. There are also environmental implications to longer stone hauls because each additional kilometre that the stone is hauled will mean increased fossil fuel consumption, more air emissions and greater wear of highways and equipment to get the products to their destination. The costs of moving 7 Mt of heavy bulk materials to market by truck should not be underestimated.

The aggregate program at DNR conducts research to mitigate this disturbing trend in the stone resource by evaluating the resource and mapping its location. DNR has also been involved in finding new economic opportunities associated with the stone resource, as well as conducting research into alternative uses of (and choices for) the materials.

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