

# Biosolids

*Focus on Forest Fertilization*

## RDN Biosolids

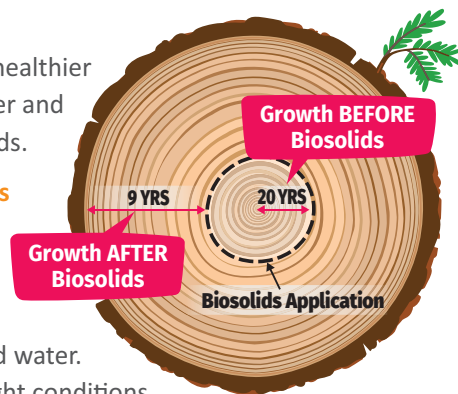
The Regional District of Nanaimo (RDN) strives to be a leader in biosolids management and is a two-time winner of the Northwest Biosolids 'Excellence in Biosolids' award. This award recognizes biosolids programs that demonstrate cost-effective and environmentally beneficial practices.

Currently, the RDN manages biosolids in a soil fabrication program and a forest fertilization program. Read on for more information on biosolids forest fertilization.

## Forest Fertilization

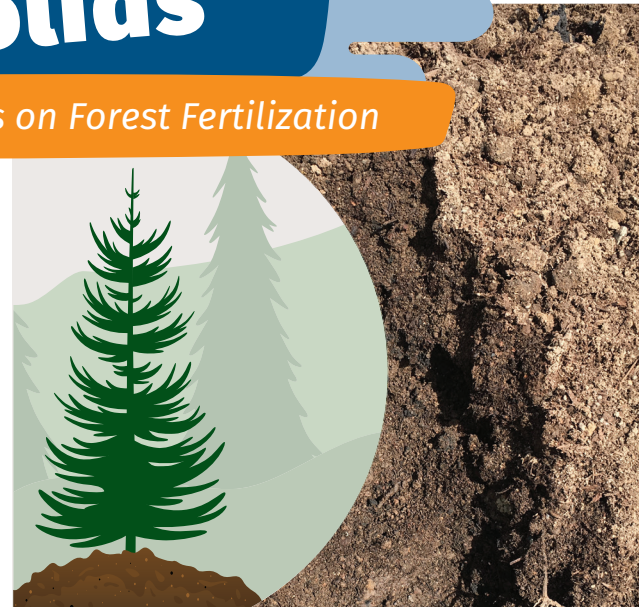
Forest fertilization using RDN biosolids has many benefits:

- Biosolids release nutrients over several years, providing a sustained source of nourishment.
- Biosolids fertilization produces healthier looking trees with greener, longer and more numerous needles and buds.
- **Trees fertilized by RDN biosolids show an 80% increase in growth.**
- The organic matter in biosolids increases the soil's ability to hold water. This helps trees withstand drought conditions.
- Biosolids fertilization decreases runoff and soil erosion by building healthy soils that support trees and understory growth.



## Soil Carbon Sequestration

Biosolids forest fertilization helps meet targets for carbon emission reduction by returning carbon back to the soil where it can be **stored for thousands of years**. It also helps trees grow bigger and faster which pulls even more carbon out of the atmosphere and combats climate change.

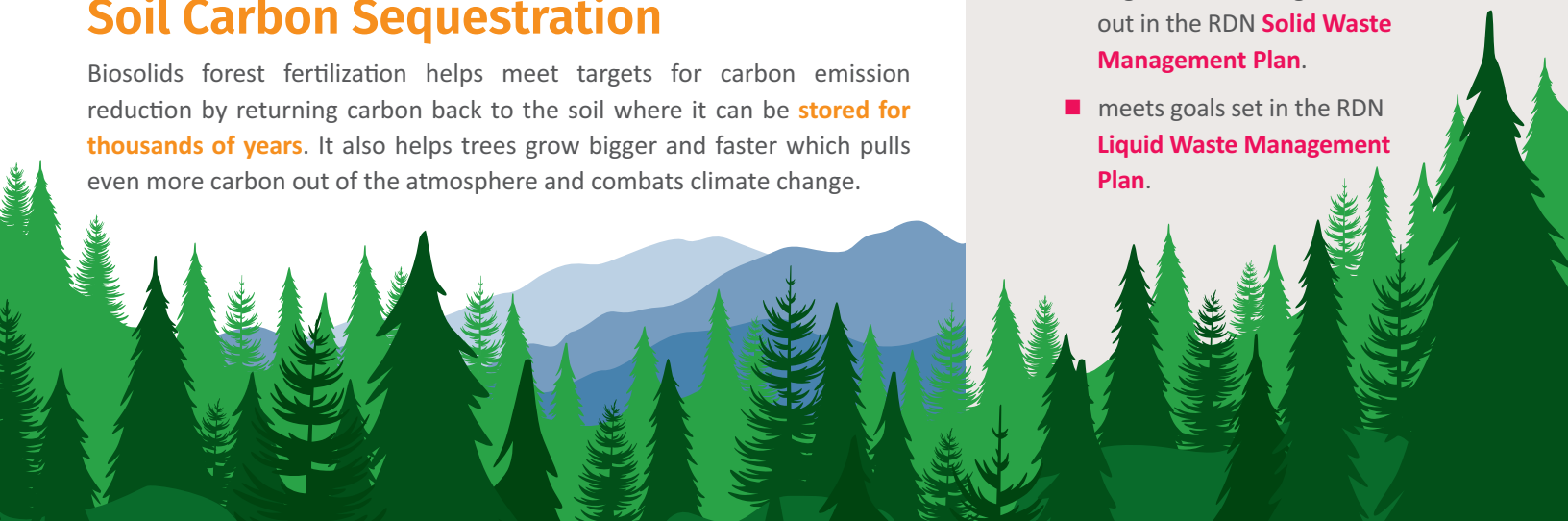


Biosolids are the solids recovered from the wastewater treatment process and stabilized to meet provincial regulations for quality.

Biosolids are high in nutrients that are essential for healthy plant growth. Biosolids can be applied to forests as an alternative to commercial fertilizers.

If RDN biosolids are not beneficially used, they are sent to the RDN Landfill. Diverting biosolids from the Regional Landfill:

- aligns with the targets set out in the RDN **Solid Waste Management Plan**.
- meets goals set in the RDN **Liquid Waste Management Plan**.



# Blackjack Ridge Forest Fertilization

The RDN Board of Directors recently awarded a 5-year biosolids management contract to SYLVIS Environmental Services Inc. (SYLVIS), working in partnership with Mosaic Forest Management (Mosaic).

The contract allows the success of the current forest fertilization program to continue at a new site with enough suitable land to manage RDN biosolids for the next 20 years.

The new forest fertilization site is located on about 3,000 hectares of private timberlands managed by Mosaic. The site is located about 8 km south of the current Doumont forest fertilization site in an area known as Blackjack Ridge.

The map below shows the location of the new Blackjack Ridge forest fertilization site.

## Key Considerations

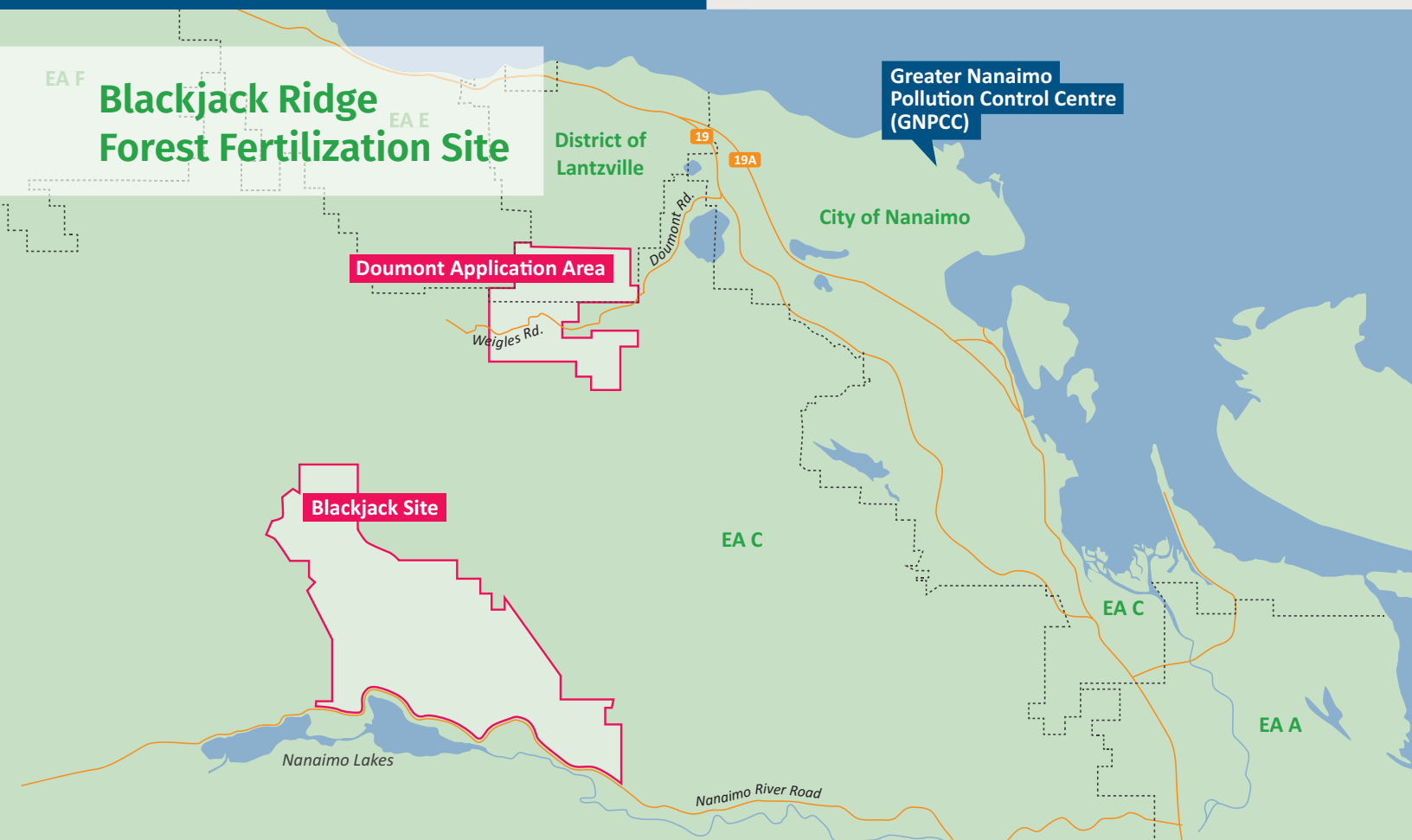


*The RDN biosolids management program aims to maximize the benefits of biosolids use while upholding strict standards for the protection of human and environmental health.*

The Blackjack Ridge forest fertilization program protects drinking water and groundwater.

- The Blackjack site is not in the Jump Lake watershed which provides drinking water to the City of Nanaimo.
- An independent hydrogeological review determined that the program will not affect groundwater quality.

SYLVIS's operations go beyond the requirements of the Organic Matter Recycling Regulation, which regulates the production and use of biosolids so that human and environmental health are protected. The Blackjack Ridge forest fertilization program includes surface water quality monitoring and soil sampling before and after biosolids applications.



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