

7041.3000 CALCULATION OF AVAILABLE AND CARRY-OVER NITROGEN.

Subpart 1. **Available nitrogen.** The formulas in this subpart shall be used for the calculation of available nitrogen for the cropping year sewage sludge is applied to the land unless it has been demonstrated to the satisfaction of the commissioner with data from laboratory and/or field tests that another calculation based on sewage sludge or site-specific mineralization rates is more appropriate.

**POUNDS OF AVAILABLE NITROGEN PER TON
OF SEWAGE SLUDGE SOLIDS**

Type of Stabilization	Application Method	Formula
Digested		
Anaerobic	Surface	$(\% \text{ organic-N} \times 4) + (\% \text{NH}_3\text{-N} \times 10)$
Anaerobic	Incorporated ¹ or injected	$(\% \text{ organic-N} \times 4) + (\% \text{NH}_3\text{-N} \times 20)$
Aerobic	Surface	$(\% \text{ organic-N} \times 6) + (\% \text{NH}_3\text{-N} \times 10)$
Aerobic	Incorporated ¹ or injected	$(\% \text{ organic-N} \times 6) + (\% \text{NH}_3\text{-N} \times 20)$
Stabilized primary and waste activated	Surface	$(\% \text{ organic-N} \times 8) + (\% \text{NH}_3\text{-N} \times 10)$
	Incorporated ¹ or injected	$(\% \text{ organic-N} \times 8) + (\% \text{NH}_3\text{-N} \times 20)$
Composted	Surface	$(\% \text{ organic-N} \times 2) + (\% \text{NH}_3\text{-N} \times 10)$
	Incorporated ¹	$(\% \text{ organic-N} \times 2) + (\% \text{NH}_3\text{-N} \times 20)$

¹Incorporated within 48 hours

Subp. 2. **First year carry-over nitrogen.** First year carry-over nitrogen from the initial application of sewage sludge shall be calculated using the formulas in this subpart.

**FIRST YEAR CARRY-OVER NITROGEN FROM INITIAL
SEWAGE SLUDGE APPLICATION**

Type of Stabilization	Pounds per Acre
Anaerobically digested	$(\% \text{ organic-N}) \times (1.6) \times (\text{tons per acre applied})$
Aerobically digested	$(\% \text{ organic-N}) \times (2.1) \times (\text{tons per acre applied})$

Stabilized primary and waste activated	$(\% \text{ organic-N}) \times (2.4) \times (\text{tons per acre applied})$
Composted	$(\% \text{ organic-N}) \times (0.9) \times (\text{tons per acre applied})$

Subp. 3. **Second year carry-over nitrogen.** Second year carry-over nitrogen from the initial application of sewage sludge must be calculated for aerobically digested and stabilized primary and waste activated sewage sludge if the initial application provided greater than or equal to 100 pounds of available nitrogen per acre. The following formula shall be used:

Second year carry-over nitrogen = $(\% \text{ organic-N}) \times (1.0) \times (\text{tons/acre applied})$.

Statutory Authority: *MS s 116.07*

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