

Land application/spreading/treatment requirements, restrictions and prohibitions on pathogen containing wastes

	<u>Administrative Code</u>					
	Municipal wastewater - landspreading of wastewater biosolids/sludge	Septage - landspreading of septage	Industrial wastes - landspreading land treatment of liquid wastes, by- product solids and sludges	Industrial wastes - other land treatment of liquid wastes, by- product solids and sludges	Domestic wastewater - treatment and dispersal to the subsurface	Municipal wastewater (and large scale domestic treatment system wastewater) - discharge to groundwater
<u>Requirement/restriction/prohibition</u>	<u>NR 204</u>	<u>NR 113</u>	<u>NR 214</u>	<u>NR 214</u>	<u>SPS 383</u>	<u>NR 206/NR 110</u>
<b>Pretreatment - pathogen reduction requirement</b>	meet Fecal Coliform limit* or use of pathogen reduction pretreatment process [s. NR 204.07(6)(b)]	pathogen reduction by pH adjustment, or use of site restrictions [s. NR 113.07(3)(d)]		Dept. approval of specific site design, construction, operation and monitoring [ss. NR 214.12, .14, .15 & .16]	If fecal coliform limit** met prior to infiltration min. 2' to bedrock or groundwater allowed	Dept. approval of specific site design, operation, management and monitoring [ss. NR 206.05 & .07]
<b>Minimum separation to bedrock and groundwater</b>	min. of 3' to bedrock and high groundwater [s. NR 204.07(3)(c)]	min. of 3' to bedrock and groundwater [s. NR 113.07(3)(b)]	min. of 3' to bedrock or groundwater [s. NR 214.17(2)(h) & s. NR 214.18(2)(g)]	<b>min. of 5' to bedrock or groundwater [ss. NR 214.12, .14, .15 &amp; .16]</b>	<b>min. of 3' to bedrock or groundwater [s. SPS 383.44(4)(b)], min. of 5' required for sandy soils w/&gt; 35% coarse fragments; note 2' allowed if fecal coliform limit** met prior to infiltration</b>	<b>min. of 5' to bedrock or highest anticipated groundwater elevation, 10' separation to bedrock for absorption pond system [s. NR 206.07/ss. NR 110.255(1), (2), (3) &amp; (4)]</b>
<b>Restrictions on areas subject to ponding, saturated soils, during rainfall events</b>	landspreading prohibition on saturated soils, during significant rainfall events and in areas of ponded water [s. NR 204.07(3)(h)]	spreading prohibition on saturated soils during rainfall events or in areas of ponded water [s. NR 113.07(3)(b)]	volume of liquid waste limited to prevent ponding, except for temporary conditions following rainfall events; if ponding occurs spreading to cease immediately [s. NR 214.17(4)(d)2]; sludge may not be spread on areas subject to ponding [s. NR 214.18(2)(e)]	Dept. approval of specific site design, construction, operation and monitoring [ss. NR 214.12, .14, .15 & .16]	Approval of specific system plans and specifications required prior to installation [s. SPS 383.22]	Dept. approval of specific site design, operation, management and monitoring [ss. NR 206.05 & .07]
<b>Restrictions on highly permeable soils</b>	landspreading prohibition on soils with perm > 6"/hr [s. NR 204.07(3)(d)]	spreading prohibition on soils with perm > 6"/hr within top 36" unless soil has water holding capacity of >5" above groundwater/bedrock [s. NR 113.07(3)(b)]		Dept. approval of specific site design, construction, operation and monitoring [ss. NR 214.12, .14, .15 & .16]	Approval of specific system plans and specifications required prior to installation [s. SPS 383.22]	Dept. approval of specific site design, operation, management and monitoring [ss. NR 206.05 & .07]
<b>Setbacks to water supply wells</b>	1,000' setback to "community" and school public water supply wells; 250' setback to "non-community" public and private wells [s. NR 204.07(3)(a)]	1,000' setback to "community" public water supply wells; 250' setback to "non-community" public and private wells [s. NR 113.07(3)(b)]	1,000' setback to "community" public water supply wells; 250' setback to all other potable wells [s. NR 214.17(2)(c) & s. NR 214.18(2)(c)]	<b>1,000' setback to "community" public water supply wells; 250' setback to all other potable wells [ss. NR 214.12, .14, .15 &amp; .16]</b>	<b>400' setback to "community" public water supply wells [s. SPS 383.43(8)(i)/s. NR 811.12(5)(d)]; 50' setback to all other potable wells [[s. SPS 383.43(8)(i)/s. NR 812.08(4)(c)]</b>	<b>1,000' setback to public water supply wells; 250' setback to private water supply wells [s. NR 206.07/s. NR 110.25(4)(c)]</b>
<b>Setbacks to "direct conduit" features</b>		setback to sinkholes (slopes < 6%): 200' if surface applied, 150' if incorporated, 100' if injected [s. NR 113.07(3)(b)12]		Dept. approval of specific site design, construction, operation and monitoring [ss. NR 214.12, .14, .15 & .16]	Approval of specific system plans and specifications required prior to installation [s. SPS 383.22]	Dept. approval of specific site design, operation, management and monitoring [ss. NR 206.05 & .07]

<b>Restrictions on runoff</b>		spreading must be done in manner to prevent surface runoff [s. NR 113.07(3)(b)]	volume of liquid waste limited to prevent runoff; if runoff occurs spreading to cease immediately [s. NR 214.17(4)(d)3]; volume of by-product solids limited to prevent runoff of solids or leachate [s. NR 214.17(4)(e)3]	Dept. approval of specific site design, construction, operation and monitoring [ss. NR 214.12, .14, .15 & .16]	Approval of specific system plans and specifications required prior to installation [s. SPS 383.22]	Dept. approval of specific site design, operation, management and monitoring [ss. NR 206.05 & .07]
<b>Restrictions on frozen or snow covered ground</b>	landspreading prohibition on frozen/snow covered ground [s. NR 204.07(3)(L)]	prohibition on spreading during months ground is frozen or snow covered [s. NR 113.07(1)(b)]	landspreading restricted to sites w/slopes < 2% when ground frozen or snow covered [s. NR 214.17(2)(f) & s. NR 214.18(2)(f)]; liquid waste max. daily volume limited to 6,800 gal/acre/day when ground frozen or snow covered [s. NR 214.17(4)(d)5]	Dept. approval of specific site design, construction, operation and monitoring [ss. NR 214.12, .14, .15 & .16]	Approval of specific system plans and specifications required prior to installation [s. SPS 383.22]	Dept. approval of specific site design, operation, management and monitoring [ss. NR 206.05 & .07]
<b>Restrictions on areas subject to ponding</b>	landspreading prohibition on areas subject to ponding [s. NR 204.07(3)(h)]	spreading prohibition on areas subject to ponding water [s. NR 113.07(3)(b)]		Dept. approval of specific site design, construction, operation and monitoring [ss. NR 214.12, .14, .15 & .16]	Approval of specific system plans and specifications required prior to installation [s. SPS 383.22]	Dept. approval of specific site design, operation, management and monitoring [ss. NR 206.05 & .07]
<b>Slope restrictions</b>	no spreading allowed on slopes > 12%; allowed on slopes > 6% with incorporation or injection [s. NR 204.07(3)(o)]	spreading allowed on slopes > 6% with incorporation or injection, no spreading on slopes > 12% [s. NR 113.07(3)(b)]	landspreading limited to sites with slopes < 12% [s. NR 214.17(2)(f) & s. NR 214.18(2)(f)]	Dept. approval of specific site design, construction and operation [ss. NR 214.12, .14, .15 & .16]	Approval of specific system plans and specifications required prior to installation [s. SPS 383.22]	Dept. approval of specific site design, operation, management and monitoring [ss. NR 206.05 & .07]
<b>Restrictions on low permeability soil</b>		spreading prohibition on soils with permeability < 0.2"/hr within top 6" [s. NR 113.07(3)(b)]		Dept. approval of specific site design, construction, operation and monitoring [ss. NR 214.12, .14, .15 & .16]	Approval of specific system plans and specifications required prior to installation [s. SPS 383.22]	Dept. approval of specific site design, operation, management and monitoring [ss. NR 206.05 & .07]
<b>crop restrictions pathogen containing waste</b>			no land application on fields used for growing crops consumed raw by humans [s. NR 214.17(4)(c)]	Dept. approval of specific site design, construction, operation and monitoring [ss. NR 214.12, .14, .15 & .16]		Dept. approval of specific site design, operation, management and monitoring [ss. NR 206.05 & .07]

\* NR 204 Fecal Coliform limit =  $\leq 2 \times 10^6$  most probable number (MPN) or colony forming units (cfu)/gram (g) total solids

\*\* SPS 383 Fecal Coliform limit =  $\leq 10^4$  colony forming units (cfu)/100 milliliter (mL) sample