

NUTRIENT MANAGEMENT for ACTIVE CONSTRUCTION

Project No. :		PPMS No. :		NMP Issued by :		Date :	
INTRODUCTION:							
<ul style="list-style-type: none"> In accordance with the provisions of the Nutrient Management Plan (NMP) all fertilizer may be applied between applied between March 15th and November 1st. In the Fredericksburg, Hampton Roads and Richmond Districts, fertilizer may be applied from March 1st and November 15th. When the Engineer determines that fertilization must be completed outside the NMP fertilization window, the fertilizer must be applied at the Temporary Seeding fertilizer rate. The N fertilizer rate is limited to 45 lbs/acre of nitrogen (1 lbs/1000 ft²) at each application and separated by at least 30 days. A maximum of 90 lbs/acre (2 lbs/1000 ft²) of 100% water soluble nitrogen (WSN) may be applied per year. Phosphorus, potassium and lime rates are based on soil test results. All fertilizer ratios are given on an N-P₂O₅-K₂O basis. There is a difference between the words "pounds of fertilizer per acre" and "pounds of nutrients per area." For example, 98 lbs/acre of 46-0-0 contains 45 lbs/acre of elemental nitrogen (N). In order to maximize fertilizer effectiveness and uptake efficiency, soil pH must be adjusted to the optimal range of 6.0 to 6.5 whenever fertilizers are applied. For normal soil materials, liming recommendations will be based upon standard agronomic criteria to maintain soil pH between 6.0 and 6.5. Lime rates are based on Tables 3-1 and 3-3 in the Virginia Nutrient Management Standards and Criteria, Revised October 2005. Lime rates supplied by the District Roadside Manager are based on liming materials at 100% CCE. Liming rates for materials that are not 100% CCE (\pm 10%) must be adjusted accordingly. VDOT will recognize environmentally sensitive sites as defined in Section 1A of the 2005 Virginia Nutrient Management Standards and Criteria and limit N and P applications appropriately. Nutrient application setbacks as set forth in Section 1B (e.g. 100 feet from wells or springs, 50 feet from surface water, 50 feet from sinkholes, 50 feet from naturally occurring limestone outcrops and 25 feet from all other naturally occurring rock outcrops) will be rigorously adhered to. However, this plan was developed such that the rate and timing of nutrient applications safeguards water quality and the plan is appropriate for use in environmentally sensitive areas. Nutrients may be applied closer to surface waters when appropriate erosion and sediment control BMP's are in place. Soil sampling and testing shall be executed prior to lime and nutrient application for new construction (any time the subsoil is disturbed) or repair of previously vegetated areas, AND the area is greater than 2 acres. (Soil samples should be collected as stated in the current Nutrient Management Plan.) 							
Type of Seeding	Area Acres	Fertilizer Ratio Lbs. /Ac	Lime Tons/Ac.		Fertilizer Tons	Lime Tons	
Seeding on 2" of Class A or B Topsoil							
<p>The Contractor shall submit soil samples for Class A or Class B topsoil analyzed by a Department of Conservation and Recreation approved laboratory; A&L Eastern Agricultural Laboratories, Brookside Laboratories, Spectrum Analytical Laboratories, Virginia Tech Soil Testing Laboratory, or Waters Agricultural Laboratories. Soil analysis of topsoil shall including pH, extractable nutrients, soluble salts, mechanical analysis (composition), salinity, percentage of organic content, and USDA soil texture class.</p> <p>Since the soil sample cannot be submitted by the Contractor until after the project is awarded, the NMP derived fertilizer ratio and lime rate for the Topsoil, will be specified after the start of the project. The District Roadside Manager will determine the amount and ratio of fertilizer that can be applied based on the soil test report and NMP.</p>							

Regular Seeding Fertilizer Rate					
<p><u>Only one application of fertilizer may be applied for the life of the project and will be applied with the Regular Seeding (core mix).</u> The rate and type of fertilizer applied must conform to the NMP for Active Construction (Chapter 10).</p> <p>When the Engineer determines that additional seeding and fertilization is required, a new soil sample must be taken and tested, and the fertilizer rates and type must be applied in accordance with the NMP for Active Construction (Chapter 10). For over-seeding, use Over-seeding Fertilization Rate below.</p> <p>When the Engineer determines that regular seeding and fertilization must be completed outside the NMP fertilization window, fertilizer and lime must be applied at the Temporary Seeding rate. This rate is defined as 50% of the lbs/acre of the fertilizer ratio as specified for Regular Seeding and the lime at the rate of 1 tons/acre with 100% CCE ($\pm 10\%$). The balance of the fertilizer and the lime (difference between the Regular Seeding and the Temporary Seeding fertilizer and lime rates) may be applied as directed by the Engineer to the same area after the fertilization window has once again opened.</p>					
Temporary Seeding Fertilizer Rate					
<p>The Temporary Fertilizer rate is defined as 50% of the lbs/acre of the fertilizer ratio (N-P₂O₂-K₂O) specified for Regular Seeding and lime at the rate of 1 tons/acre with 100% CCE ($\pm 10\%$).</p> <p>The rate of fertilizer (N-P₂O₂-K₂O), applied after construction resumes, is based on whether or not the site is regraded to expose subsoil materials.</p> <ol style="list-style-type: none"> 1. If the area receiving the Temporary Seeding fertilizer rate is regraded to expose subsoil, apply the Regular Seeding rate of fertilizer and lime. 2. If the area receiving the Temporary Seeding fertilizer rate is not regraded then apply only 50% of the Regular Seeding rate of N-P₂O₂-K₂O and lime, no sooner than 30 days after previous fertilizer application. 					

Over-seeding Fertilizer Rate						
<p>The Engineer will require the contractor to over-seed an area when the existing stand of the permanent vegetative cover, as specified by the Roadside Development Sheet for that job (grass and/or legumes), covers between 50 and 75 percent of the ground. Nurse crop annual species such as rye and millet are temporary varieties and are not considered permanent vegetative cover.</p> <p>If less than 50% of the ground for the site is covered with permanent vegetation, the District Roadside Manager should be contacted to collect a soil sample. Recommendations for the application of seed mixtures, and a new NMP based fertilizer/lime recommendation will be developed based on the soil test report.</p> <p>Over-seeding should always be accompanied by the application of fertilizer and lime as specified in the NMP.</p> <p>The nitrogen application rate is limited to 45 lbs/acre (1 lbs/1000 ft²) at each application and separated by at least 30 days, therefore over-seeding can be completed only when more than 30 days have passed since Regular Seeding. A maximum of 90 lbs/acre (2 lbs/1000 ft²) of 100% water soluble nitrogen (WSN) may be applied per year. No additional phosphorus may be applied unless a new soil sample is taken and new NMP recommendations are developed based on the soil test report.</p>						

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