

**UPDES CAFO General Permit (UTG080000)
Narrative Rate Methodology Description**

If indicated in section XII.C.5 of the UPDES CAFO General Permit NMP form, complete the following to describe the methodology and data to be used to account for amounts of manure, litter, compost, and process wastewater to be land applied, including calculations, sources of data, protocols for making determination, etc. Attach this completed form to the submitted NMP in Appendix G.

a. Results of soil tests.

i. Describe how the soil test results are used in determining the field-specific land application rates, include calculations, as applicable:

ii. Provide the most recent soil test results for each field:

Laboratory reports for all fields attached to NMP (Appendix D)

OR

Complete the table below

Field Name or Number	Sample Date	Analytical Results (ppm)		
		Soil Organic Matter	Total-N	Total P

Facility Name: _____ 1

b. Credits for all nitrogen in the field that will be plant-available.

Describe how soil nitrogen credits are calculated and used in determining the field-specific land application rates, include calculations, mineralization rates or availability factors, etc., as applicable:

c. Amount of nitrogen and phosphorus in the manure, litter, compost, and process wastewater to be land applied.

Describe how the manure, litter, and process wastewater nitrogen and phosphorus content are used in determining the field-specific land application rates, include calculations, availability factors, etc., as applicable:

d. Consideration of multi-year phosphorus application.

For fields where land application rates are limited based on crop phosphorus needs (identified in section XI.B.1 of the NMP), indicate whether multi-year phosphorus applications are planned and how they are accounted for in determining the field-specific land application rates, include calculations, etc., as applicable:

e. Account for all other additions of plant-available nitrogen and phosphorus in the field.

Describe how other additions of plant-available nitrogen and phosphorus (e.g., commercial fertilizer, biosolids, nutrients in irrigation water, etc.) are accounted for in determining the field-specific land application rates, include calculations, etc., as applicable:

f. Form and source of manure, litter, compost and process wastewater.

Describe how the form (e.g., solid, slurry, liquid) and source (e.g., storage structure) are considered in determining the field-specific land application rates, include calculations, etc., as applicable:

g. Timing and method of land application

Describe how the timing (seasonality, time to incorporation, etc.) and method (based on land application equipment used) are considered in determining the field-specific land application rates, include calculations, volatilization rates or availability factors, etc., as applicable:

h. Volatilization of nitrogen and mineralization of organic nitrogen application

Describe how the volatilization of nitrogen and mineralization of organic nitrogen are considered in determining the field-specific land application rates, include calculations, volatilization rates, mineralization rates, availability factors, etc., as applicable.