

A comparison of soil map information for FDE management on two farms in Auckland region.

Dr Reece Hill¹, Mr Dan Borman¹, Dr Doug Hicks², Dr Peter Singleton³

¹*Landsystems Ltd*, ²*Soil Consultant*, ³*Natural Knowledge Ltd*

Managing the land application of Farm Dairy Effluent (FDE) is an increasingly important issue for farmers as regional authorities develop policy for FDE management and the National Policy Statement for Freshwater is implemented. Correct FDE land application to minimise the risk of environmental effects often requires the farmer to follow specific policy conditions or guidelines, including the amount and rate of FDE application and storage requirements. Underpinning these conditions is the identification of effluent runoff risk by means of a developed FDE risk classification of soils (Houlbrooke et al. 2012). Current industry guidelines and regional authority policies commonly promote S-Map to identify high and low FDE risk soils for farm FDE management. This is likely because of S-Map's perceived national consistency, intended national coverage, inclusion of FDE classification in the factsheet, its increasing interoperability with OVERSEER[®] and because costs are offset by regional and national funding. In contrast, alternative sources of soil information (NZLRI-New Zealand Land Resource Inventory, historic soil maps and farm scale soil maps) either do not have FDE soil risk classification attached, or require interpretation or mapping by a soil scientist at a cost. This paper compares soil information from two farm scale soil maps with available S-Map and NZLRI soil information to examine the influence of soil map scale on assessing FDE soil risk. For both farms, the total areas of high and low FDE soil risk differed depending on the source of soil map information. Finer resolution high and low FDE soil risk areas were identified by farm scale soil mapping. The farm scale soil map information provided a more accurate fit of the soils in the landscape. This allowed for more precise application of FDE to land according to soil risk and improved the accuracy of FDE storage calculations.

D Houlbrooke, D Hicks, F Curran-Cournane, M Martindale, V Vujcich (2012) Categorisation of soil risk associated with land application of farm dairy effluent: Auckland region. Auckland Council, Auckland.