

At the recent West Region State Agronomists meeting here in Portland, we presented information about Nitrate Leaching Potential soil interpretations I developed in the National Soil Information System (NASIS) that are available on Web Soil Survey for some States. There are separate interpretations for irrigated and nonirrigated conditions.

Currently Montana, Oregon, and Washington are using both the irrigated and nonirrigated versions of these interpretations on Web Soil Survey. Arizona is using the irrigated version. Washington has selected these interpretations as a nitrogen nutrient risk assessment tool in their 590 – Nutrient Management conservation practice standard.

I offered to run these interpretations for any West Region State that was interested and Niels asked me to do this for Utah. Attached are files described below with the nitrate leaching potential ratings for Utah soils:

1. **UT_NASIS_nitrate_leach_potential_8_2016.xlsx** – spreadsheet with the irrigated and nonirrigated nitrate leaching potential ratings for all Utah NASIS soil mapunit major components. The ratings are in both a class form such as “High”, “Moderate”, etc. and a numerical rating between 0.00 and 1.00. The higher the numerical rating, the higher is the predicted nitrate leaching potential. “NIRR” indicates nonirrigated and “IRR” indicates irrigated. There is a metadata worksheet in the spreadsheet with definitions for all the column headers.

X	Y	Z	AA
NO3_Leach_Potential_IRR_class	NO3_Leach_Potential_NIRR_class	NO3_Leach_Potential_IRR_rating	NO3_Leach_Potential_NIRR_rating
Moderately high	Moderate	0.63	0.49
High	Moderately high	1.00	0.71

2. **UT_NASIS_nitrate_leach_potential_8_2016.zip** – zip file that contains a personal geodatabase with a single table that contains the same data as the above spreadsheet. This table can be joined to any Utah soil survey SSURGO spatial data to create your own maps of the nitrate leaching potential ratings. Join the table to the spatial data using the “mukey” field in both.
3. **UT_NASIS_nitrate_leaching_interp_irrigated_map.pdf** – Utah map of the nitrate leaching potential ratings for irrigated conditions.
4. **UT_NASIS_nitrate_leaching_interp_nonirrigated_map.pdf** – Utah map of the nitrate leaching potential ratings for nonirrigated conditions.
5. **Revised_SDV_rule_descriptions_WA_nitrate_leaching_interps.docx** – descriptions of these interpretations with information about criteria. These descriptions appear on Web Soil Survey and the Soil Data Viewer ArcMap tool when the interpretations are selected.
6. **WSS_report_Nitrate_Leaching_Potential_Irrigated_WA_Franklin_Co.pdf** - example map and report from Web Soil Survey for the irrigated condition nitrate leaching potential interpretation.



