

Section 9 of 22 (9a - Effluent Irrigation Guide)

* Total pounds of N to apply/acre/yr.	Range of Effluent N concentrations in storage ponds (mg/l or ppm)					NOTE: Lab analysis is needed to determine actual ppm of N in effluent. CONVERSIONS: 2.72 x ppm = lbs/ac-ft or 0.227 x ppm = lbs/ac-in Ac-in = 27,157 gallons
	200	300	400	500	600	
	Acres-Inches of Effluent needed to apply given pounds of Nitrogen					
50	1.10	0.73	0.55	0.44	0.37	
100	2.22	1.47	1.10	0.88	0.73	
150	3.30	2.20	1.65	1.32	1.10	
200	4.40	2.94	2.20	1.76	1.47	
250	5.51	3.67	2.75	2.20	1.84	

*** Actual Nitrogen applied should be based on Effluent and Soil lab tests, average annual crop yield and NMSU recommendations.**

Example: Corn Silage & Cool Season Grass (Pasture) Net Irrigation Requirements (NIR) in inches/yr

Corn Silage (Las Cruces, NM)	Corn Silage (Roswell, NM)	Corn Silage (Portales, NM)	Corn Silage (Clovis, NM)	Pasture, Cool Season Grass (Roswell, NM)	Pasture, Cool Season Grass (Portales, NM)
28.0	24.0	24.0	20.0	35.0	31.4

<p>Example Calculation:</p> <ul style="list-style-type: none"> ➤ Crop: Corn Silage (Las Cruces, NM) ➤ NIR: 28.0" ➤ N requirement: 150 lbs. per acre (based on soil test/recommendations) ➤ Effluent Concentration: 400 mg/l of N (lab test) ➤ Effluent needed: 1.65 ac-in (to get 150 lbs. N) ➤ NIR – Effluent needed: 28.0" – 1.65" = 26.35" of irrigation water needed (plus the 1.65" of water in the effluent) 	<ul style="list-style-type: none"> ➤ % Irrigation Water contributed by the Effluent: 1.65" ÷ 28.0" ≈ 6.0% ➤ EC of Effluent: 5.0 dS/m (5.0 dS/m x 0.06 = 0.3 dS/m - salts in effluent) ➤ EC of Irrigation Water: 2.0 dS/m (2.0 dS/m x 0.94 = 1.88 dS/m - salts in irrigation water) ➤ Total Salt content in the irrigation and effluent mixture: 1.88 + 0.3 = 2.18 dS/m (EC) 	<p>Enter Your Information:</p> <ul style="list-style-type: none"> ➤ Crop: ➤ NIR: ➤ N requirement: ➤ Effluent Concentration: ➤ Effluent needed: ➤ NIR – Effluent needed: 	<ul style="list-style-type: none"> ➤ % Irrigation Water contributed by the Effluent: ➤ EC of Effluent: ➤ EC of Irrigation Water: ➤ Total Salt content in the irrigation and effluent mixture:
---	---	--	---

NOTE: Total Salinity is based on a weighted calculation of irrigation & effluent (based on % mixture); EC = Electrical Conductivity in dS/m
Agonomy Tech Note 76 (<http://www.nm.nrcs.usda.gov/technical/handbooks/iwm/nmiwm.html>)

rudy.garcia.2008