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**NATIONAL ENGINEERING MANUAL
210-V
AMENDMENT NUMBER 45**

SUBJECT: ENG-523 – NEW MEXICO AMENDMENT

Purpose:

The purpose of this amendment is to distribute a New Mexico amendment to the National Engineering Manual, Part 523, Irrigation.

Effective Date:

This amendment is effective upon receipt.

Filing Instructions:

Remove Part NM523.00 (page NM523-1) and insert Part NM523.01 (page NM523.01-1).

Receipt of this transmittal should be posted to the New Mexico tabulation sheet of the National Engineering Manual.

A handwritten signature in cursive script, appearing to read "Dennis L. Alexander".

DENNIS L. ALEXANDER
State Conservationist

Enclosure

Distribution:
All Area Offices
All Field Offices
All Engineers

SUBCHAPTER C APPLICATIONS

PART NM523, IRRIGATION

NM523.01 Technical Assistance.

Irrigation Water Management (IWM) is the process of determining and controlling the volume, frequency, and application rate of water in a planned, efficient manner. The NRCS will provide technical assistance to irrigators, as necessary, to ensure that they are able to obtain one of the two following levels of IWM. Agronomy Technical Note 76 is an excellent resource for understanding the principles of irrigation water management.

- (a) The non-intense management level is reached when the irrigator keeps records for all irrigations for the growing season to include crop grown, moisture condition prior to irrigation in the active root zone, irrigation dates, type of irrigation system, amount of water applied per irrigation, and acreage on which water was applied. Soil moisture is to be determined by the feel-and-appearance or more accurate method. Amount of water applied is determined by using acceptable measuring method such as float test, ramp flumes, propeller meters, or ultrasonic devices. The basic equation, $QT = DA$, can be used to compute depth of water applied.
- (b) The intense management level is reached when the non-intense level is reached plus when the irrigator determines the following: Soil moisture in the root zone by use of tensiometers and/or electrical resistance blocks; Amount of water to apply based upon soil moisture deficit in the active root zone and the leaching requirements; Irrigation efficiency and; Crop Irrigation Requirements, as determined from Appendices I through IV of the New Mexico Irrigation Guide.

Documentation of IWM can be achieved by reviewing the records of the irrigator for the season, assuring completeness and accuracy, and placing a copy of the results in the cooperator file. The following table is an example format for documenting information from the irrigator. Existing New Mexico forms may be used as appropriate.

Farm Name: _____ Location: _____ County: _____ Field Office: _____					
Method used to Measure Soil Moisture: _____ Method used to Measure Water: _____					
Field Number: _____ Acres: _____ Crop: _____ Documented By: _____					
System Type/Code: _____ Crop Irrigation Requirements: _____ Inches					
Irrigation Number	Water to Apply – Based upon Average Moisture Depletion in Root Zone and Leaching Requirement (Intense Management Level)	Irrigation Date and Amount	Irrigation Efficiency	Net Application	Comments / Initial / Date
	Inches	Date/Inches	-Percent-	-Inches-	
1		/			
2		/			
3		/			
4		/			
5		/			
TOTALS	_____ Inches	_____ Inches	_____ %	_____ Inches	