STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION OF THE NEW MEXICO OIL AND GAS ASSOCIATION FOR AMENDMENT OF CERTAIN PROVISIONS OF TITLE 19, CHAPTER 15 OF THE NEW MEXICO ADMINISTRATIVE CODE CONCERNING PITS, BELOW GRADE TANKS, CLOSED LOOP SYSTEMS AND OTHER ALTERNATIVE METHODS TO THE FOREGOING, AND AMENDING OTHER RULES TO CONFORMING CHANGES STATEWIDE.

CASE NO. 14784
CASE NO. 14785

MOTION TO TAKE ADMINISTRATIVE NOTICE OF THE RECORD IN OIL CONSERVATION COMMISSION CASE NO.14015

Earthworks' Oil & Gas Accountability Project ("OGAP") respectfully moves the Oil Conservation Commission ("Commission") to take administrative notice of the entire record in Commission Case No. 14015 and admit that record into evidence in the above matter.

OGAP states the following grounds for this motion

1. The purpose of the hearing in this matter is to assure that the Commission receives relevant data, information and evidence to support any changes to the Pit Rule. § 19.15.3.12.B.2 NMAC ("The Commission shall admit relevant evidence …"). The Oil Conservation Division ("Division") and OGAP persuaded the Commission to adopt the Pit Rule by submitting the sworn testimony and exhibits of several experts in Case No. 14015. *See generally*, Order No. R-12939. In considering the New Mexico Oil & Gas Association's ("NMOGA") and the Independent Petroleum Association of New Mexico's ("IPANM") petitions to amend the Pit Rule in the above-captioned matter, the Commission cannot rationally disregard this substantial evidence, which it admitted in the prior proceedings and relied upon to adopt the Pit Rule in 2008. *See, In re: Application of Timberon Water Co.*, 114 N.M. 154,156, 836 P.2d

73,75 (1992) ("For administrative agencies, arbitrary and capricious action has been defined 'as willful and unreasonable action, without consideration and in disregard of facts or circumstances'") (internal citation omitted).

2. The Rules of Evidence do not apply to this proceeding and therefore do not bar admission of relevant evidence. § 19.15.3.12.A.1 NMAC. The administrative record of the Pit Rule, which the Commission has already determined is competent, is directly relevant to the issues in the above-captioned matter. The petitioners in the current matter seek to radically diminish the public health and environmental protections in the Pit Rule and seek to re-interpret evidence presented in that proceeding to support their petition. *See, e.g.*, NMOGA Petition, generally; IPANM Prehearing Statement at 4 ("Mr. Mullins has also completed extensive modeling which expands on the NMOCD modeling of the 2007 and 2009 hearings which will give scientific support to his position"). Moreover, as the foundation upon which the current Pit Rule amendments are premised, the Pit Rule record is clearly relevant. Finally, OGAP intends to use prior sworn testimony and exhibits to demonstrate inconsistencies in the testimony of witnesses for NMOGA and IPANM in the current matter and the inconsistency in the Division's position in this matter as compared to its position in 2007.

3. However, even if the Rules of Evidence applied, the record from the Pit Rule would be admissible because the "records, reports, statements or data compilations, in any form, or public offices or agencies" are admissible in a court of law under NMRE 11-803(H). The Pit Rule record is clearly a "record" and a compilation of "statements" and "data." Therefore, taking administrative notice of and moving the Pit Rule record into evidence in this matter is appropriate.

4. Finally, taking administrative notice of the Pit Rule record is consistent with the Commission's past practice. When the Commission amended the Pit Rule's chloride standard in 2008, it took administrative notice of the entire Pit Rule record and relied upon various portions of that record to support its decision. *See, OGAP v. NM Oil Conservation Comm'n*, No. D101-CV-2009-002473, New Mexico Oil Conservation Commission's Response to Appellant's Statement of Appellate Issues at 4. The Commission should do the same in this case.

WHEREFORE, OGAP respectfully requests that the Commission take administrative notice of the entire Pit Rule record in Case No. 14015, including all testimony, pre and post hearing statements, exhibits, briefs, arguments, transcripts and final decisions and admit that record into evidence in the above-captioned matters.

Respectfully submitted:

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CERTIFICATE OF SERVICE

I hereby certify that on this 8th day of May, 2012, I have delivered a copy of the foregoing pleading in the above-captioned case via electronic mail and/or US Mail, First Class to the following:

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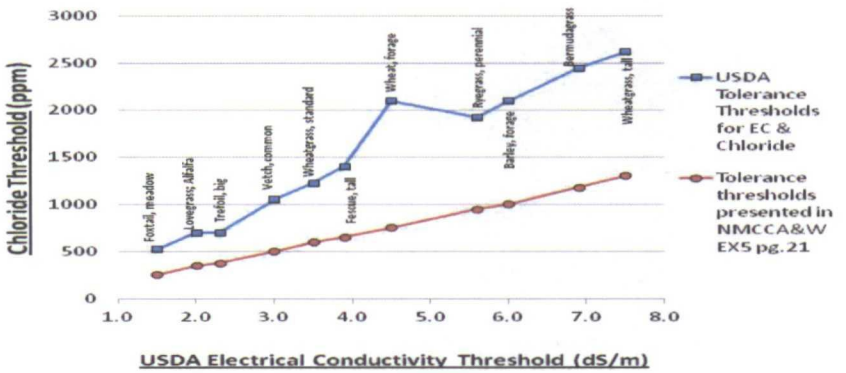
Chloride Thresholds of Select Plants:
Agricultural Research Service – United States Salinity Lab vs Neeper

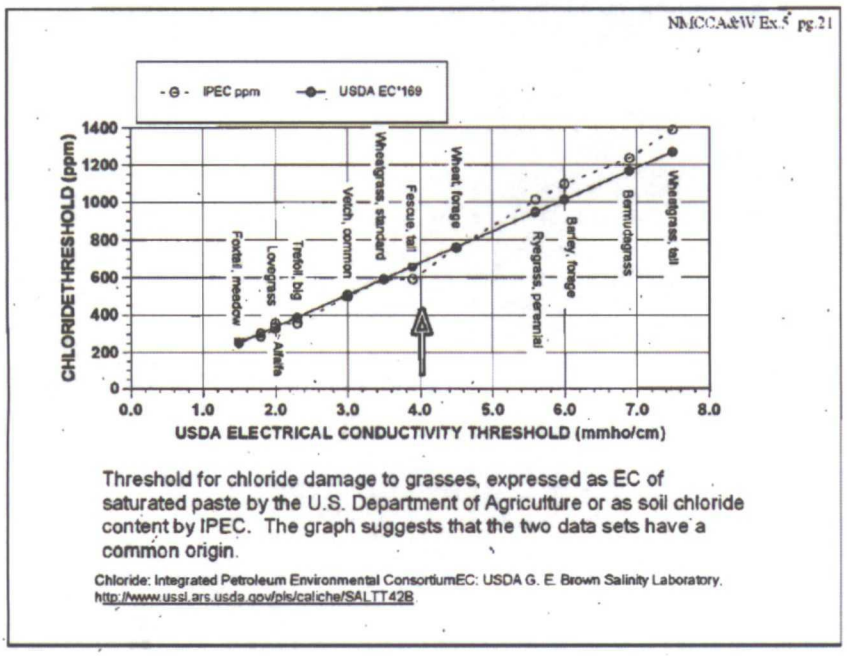
	Chloride Threshold		Dr. Neeper
PLANT	meq/l	ppm	ppm
Meadow foxtail	15	525	200-300
Lovegrass	20	700	300-400
Big trefoil	20	700	300-400
Common vetch	30	1050	About 500
Standard wheatgrass	35	1225	About 600
Tall fescue	40	1400	600-700
Perennial ryegrass	55	1925	900-1000
Bermudagrass	70	2450	1100-1200
Tall wheatgrass	75	2625	About 1400

BEFORE THE OIL CONSERVATION COMMISSION
CASE NO. 14784 NMOGA EXHIBIT 17-46
HEARING DATE: JUNE 21-22, 2012

Chloride Thresholds vs Salinity Thresholds



Dr. Neeper's chart, pg. 21 of his presentation



BEFORE THE OIL CONSERVATION COMMISSION
CASE NO. 14784 NMOGA EXHIBIT 17-47
HEARING DATE: JUNE 21-22, 2012

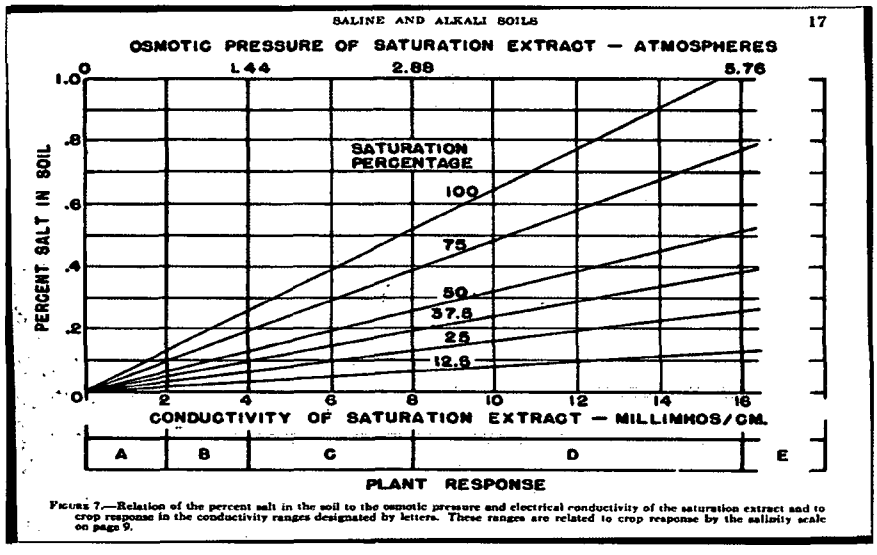


FIGURE 7.—Relation of the percent salt in the soil to the osmotic pressure and electrical conductivity of the saturation extract and to crop response in the conductivity ranges designated by letters. These ranges are related to crop response by the salinity scale on page 9.

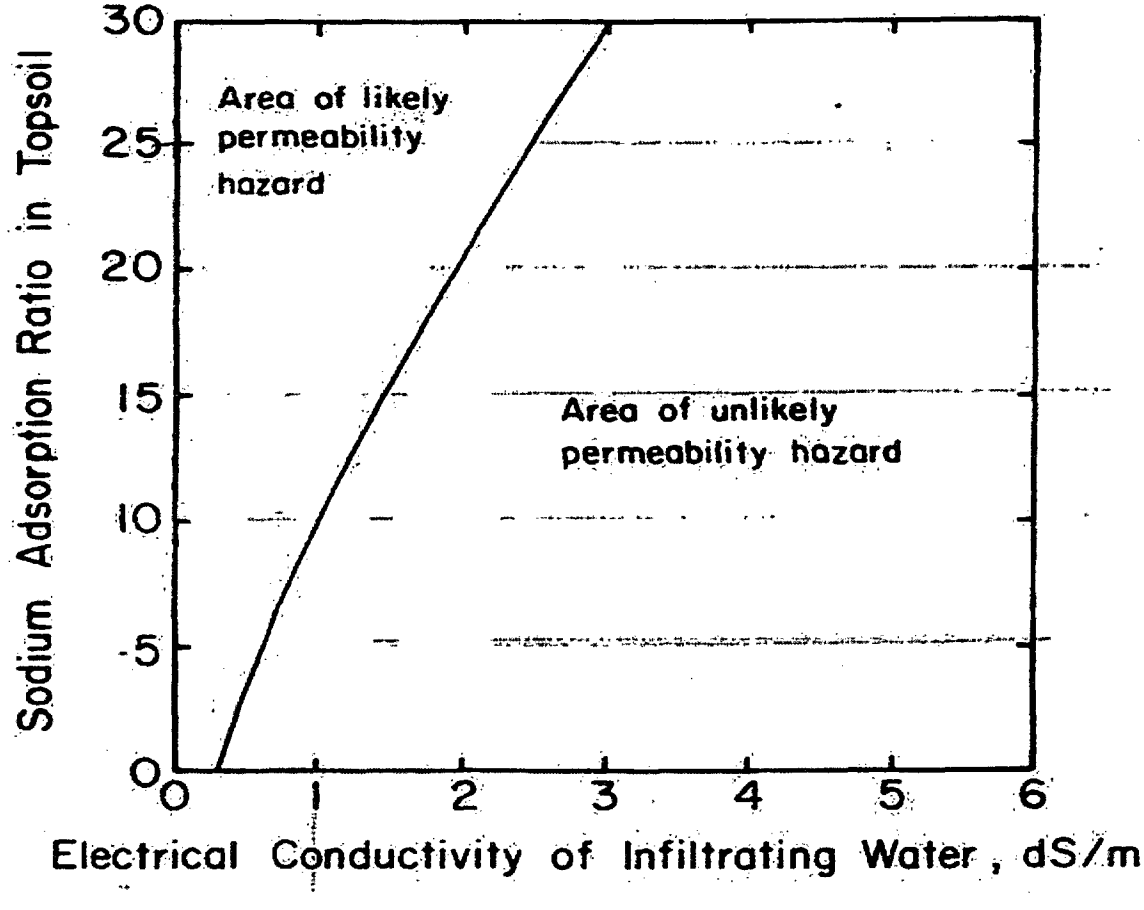
In response to: Dr. Neeper's slide page number 22, where he states:

"Salt is damaging to plants when the EC of saturated paste exceeds 4 (roughly 600 mg/kg dry soil).

The above chart demonstrates the profound effect that saturation percent of soil has on the amount of salt in soil. Dr. Neeper's limit of 600 mg/kg is significantly in error for most soils. (Note: To convert percent salt in soil in the above chart to mg/kg (or ppm) of salt, multiply the percent salt by 10,000. Therefore a salt content of .2% is 2,000 mg/kg or 2,000 ppm.

BEFORE THE OIL CONSERVATION COMMISSION
CASE NO. 14784 NMOGA EXHIBIT 17-48
HEARING DATE: JUNE 21-22, 2012

FIGURE 2
Threshold values of SAR of topsoil and EC of infiltrating water for maintenance of soil permeability (after Rhoades 1982)



BEFORE THE OIL CONSERVATION COMMISSION
CASE NO. 14784 NMOGA EXHIBIT 17-49
HEARING DATE: JUNE 21-22, 2012

Total Water Potential

The total water potential (P_T) can be expressed as an equation relative to the components; the water and all factors that act (pull) on it.

$P_T = P_M + P_G + P_O + P_P$, where

P_M – matric potential, soil surfaces and capillary forces

P_G – gravity potential

P_O – osmotic potential (salts)

P_P – pressure potential (ponded water), otherwise known as head

Water rise above water tables, NMCCA&W, Ex5, p45-47
Dr. Neeper's simulation shows a uniform water content of >30% saturation (~15% volumetric water content) developing above a water table at 67 ft.

This is unrealistic.

Soil pores are small, and in many instances exhibit some properties of interconnected capillary tubes. The height of rise of water in a capillary tube is

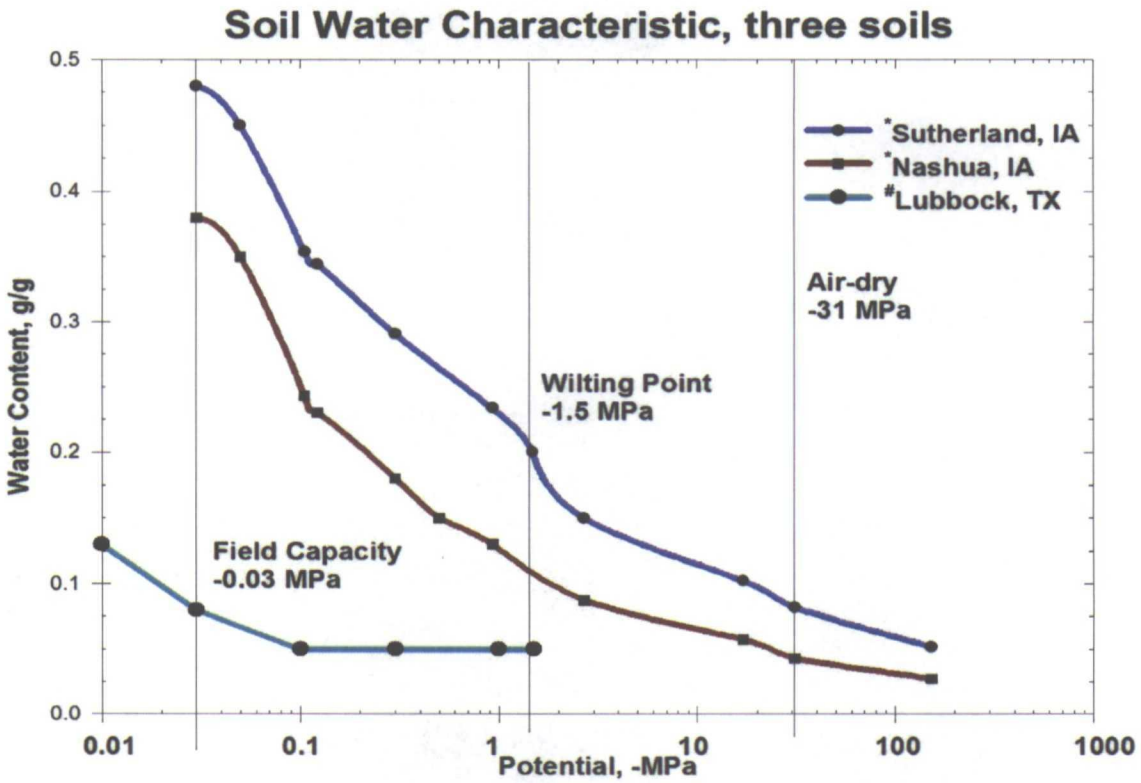
1. directly proportional to the surface tension between the liquid and the air, and
2. inversely proportional to the capillary diameter, density of the liquid, and gravity

Capillaries pull water up against gravity, but there is a finite limit to how high water will rise above a water table. The practical distance is about an order of magnitude less than 67 ft.

Scanlon, B.R. 1992. Water Resources Research 28(1):285-297.

Water potentials from 1 to 5 m below surface in desert soils were air dry, -2.5 to -4 MPa, generally less than 8% volumetric water content. (half the amount in Dr. Neeper's simulation)

Direct, p. 1139-1141, cross, p. 1217-1218, NMCCA&W Ex.5, pg.14, 34-35, 38-39



*Robinson. 1993. PhD Dissertation. Iowa State University, Ames, IA.

#Baumhardt, Lascano and Krieg. 1995. Tech Rep 95-1. Tx. Agric. Exp. Stn., Texas A&M Univ., College Station, TX.

This figure provides a scale of reference for field capacity, wilting point, and air-dry soils and actual water contents. Most of the water contents Dr. Neeper presents do not correspond to the moisture potential . Air-dry soils do not have such high moisture content.

BEFORE THE OIL CONSERVATION COMMISSION
CASE NO. 14784 NMOGA EXHIBIT 17-52
HEARING DATE: JUNE 21-22, 2012

Lea County, NM soils, NMCCA&W, Ex5, p44

Mean annual precipitation	14.7 in
Mean annual pan evaporation	~ 96 in
Precipitation: PET ratio	~0.2 in
Volumetric moisture,~300 days	4 to 8%*

*These soils at this depth are between wilting point and air dry for most of the year.

NMCCA&W Ex.5, p 48, Suggests chloride travels to groundwater at 52 feet in 40 years in loose soil, and shallower depths in moderate and tight soils.

Phillips, F.M. 1994. Environmental tracers for water movement in desert soils of the American Southwest. Soil Sci. Soc. Am. J. 58:15-24.

Under natural precipitation, chloride from nuclear weapons testing in the 1950s had moved less than 2 m into the soil, the majority of bulges at less than 1 meter.

NMCCA&W, Ex.5, p 49, In loose soil, the calculated recharge at 67 ft is between 1.4 and 3.5 inch/yr, but <0.05 in/yr in moderate and tight soils.

Scanlon, B.R. 1992. Water Resources Research 28(1):285-297.
Under natural precipitation, using bomb-chloride, downward moisture flux at 0.5 m (20 inches) by $^{36}Cl/Cl$ ratio = 1.4 mm/yr

Scanlon, B.R., and R.S. Goldsmith. 1997. Water Resour. Res. 33(10):2239-2252.
On flat plains in 16 to 20-inch precipitation zone, water flux ≤0.1 mm yr^{-1} in past 2000 to 5000 yrs