

Appendix C 962
 Losses to System Inefficiency
 air loss leaf evap leaks

50-year average here
 Pivots only
 In-field loss = deep perc

Table 4. Results of simulations for ET, CIR and net irrigation for NWS weather stations used in the analysis.
 (from Appendix C. of 2006 Annual Evaluation of Availability of Hydrologically Connected Water Supplies).

For Pivot Irrigation:
 Applic. Eff. 0.85

Site	ET Full Yield, Inches/Year	ET Non Irrigated, Inches/Year	CIR, Inches/Year	Net Irrigation, Inches/Year	Latitude, Degrees	Longitude, Degrees	Elevation, Meter	Climate Division	Station Code	Station Name	Gross Irrigation, inches	Beta
BENK	31.25	17.78	13.47	14.37	40.05	-101.53	922	6	c250760	BENKELMAN	16.9	0.797
CURT	31.22	19.38	11.84	13.15	40.67	-100.48	829	6	c252100	CURTIS 3 NNE	15.5	0.765
IMPE	29.85	18.30	11.56	12.67	40.52	-101.63	999	6	c254110	IMPERIAL	14.9	0.776
MADR	31.45	18.73	12.72	13.77	40.85	-101.53	975	6	c255090	MADRID	16.2	0.785
MCCO	29.05	19.31	9.74	11.14	40.20	-100.62	771	6	c255310	MCCOOK	13.1	0.743
CAMB	31.23	19.77	11.46	12.16	40.27	-100.17	689	7	c251415	CAMBRIDGE	14.3	0.801
HARL	30.17	20.70	9.47	10.35	40.08	-99.20	610	7	c253595	HARLAN COUNTY	12.2	0.778
SUPE	29.68	23.05	6.63	8.27	40.02	-98.05	482	8	c258320	SUPERIOR	9.7	0.681
Average	30.49	19.63	10.86	11.99							14.1	0.77
Average URNRD	30.85	18.27	12.58	13.60							16.0	0.79
Average MRNRD	30.14	19.35	10.79	12.15							14.3	0.75
Average LRNRD	30.36	21.17	9.19	10.26							12.1	0.75

Reduction in ET for irrigation amounts less than the gross irrigation needed for full yield.

Upper Rep. NRD Irrigation Amount inch/yr	ET Reduction inches/year	Middle Rep. NRD Irrigation Amount inch/yr	ET Reduction inches/year	Lower Rep. NRD Irrigation Amount inch/yr	ET Reduction inches/year	Notes
0	12.6	0	10.8	0	9.2	Full Irr ET - Non Irr ET
1	11.6	1	9.8	2	7.2	
2	10.6	2	8.8	4	5.4	
3	9.7	3	7.9	0	9.2	
4	8.7	4	7.0	1	8.2	
5	7.8	5	6.1	2	7.2	
6	6.9	6	5.2	3	6.3	
7	6.1	7	4.4	4	5.4	
8	5.2	8	3.6	5	4.5	
9	4.4	9	2.9	6	3.7	
10	3.6	10	2.2	7	2.9	
11	2.9	11	1.5	8	2.2	
12	2.2	11.5	1.2	9	1.5	
13	1.5	12	1.0	9.5	1.2	
13.5	1.2	13	0.4	10	0.9	
14	0.9	14	0.1	11	0.4	
15	0.4	14.3	0.0	11.5	0.2	
16	0.0	16	0.0	12	0.0	

In practice NRDs would need more than one zone to normalize ET reduction or yield, since they cover a large geographic area.

LRNRD split between 11 & 12 inches east or west of Highway 183 respectively.

MRNRD Alloc.

URNRD Alloc.

kelly

MRNRD Draft Proposal, Wertz. 6/21/04

- 11.5 inch allocation on all certified acres.
- 3 year allocation period
- Limit reserve to 6 inches
- No more than 3 inch over use in any year
- No differentiation of wells based on date
- Water Short Years
 - No over use
 - Allocation to 90% of alluvium acres and to 95% of upland acres
- Ask for early meter reading for fall irrigation to go to next years allocation.
- Incentive program (somehow)
 - (\$0.50 to \$1.00 per certified acre 315,000 acres) ??????????
 - \$0.25 = \$78,750
 - \$0.50/ acre = \$157,500
 - \$0.75/acre = \$236,000
- Penalty for over use –
 - 1 inch overuse = 1 inch deduction next period
 - 2 inch overuse = 3 inch deduction next period
 - 3 inch overuse = 6 inch deduction next period
 - 4 inch overuse = 9 inch deduction next period
- Emergency Water – 4 inches available to establish cover crop. Deducted from next allocation
- Water Transfers
 - No transfers more than 10 miles from original use.
 - No transfers into alluvium.
- Surface Water Comingled Acres
 - Total of surfacewater allocation and groundwater allocation can not total more than current groundwater allocation.
 - Can not sell surfacewater allocation to increase groundwater allocation.