

Appendix Table A1. Summary statistics for selected variables, 1999-2009

Variable	Mean	Std. dev.	Description
Cropland value	7338.58	4012.41	Cropland value per acre as reported by farm operators in responding to June Area Survey, adjusted for inflation to \$2009
Export restriction (ER)	0.75	0.44	Equals 1 if located in county with an export restriction, 0 otherwise
Irrigation district	0.58	0.49	Equals 1 if located within irrigation district boundaries, 0 otherwise
Depth to groundwater	46.86	97.49	Depth from land surface to aquifer table, in feet
Depth to groundwater CV	0.03	0.50	Moving 5-year coefficient of variation of depth to groundwater
Idled cropland share	0.03	0.09	Proportion of cropland idled
Orchard/vineyard share	0.53	0.43	Proportion of cropland in orchards and vineyards

Note: All summary statistics are computed using survey weights from the June Area Survey.

Appendix Table A2. Robustness checks for full JAS sample

	(1)	(2)	(3)	(4)
Dry period 1 (2001-02)	0.044 (0.64)	0.059 (1.08)	0.003 (0.10)	0.050 (0.73)
Wet period 2 (2003-06)	0.120 (0.61)	0.139 (0.61)	0.107 (0.61)	0.119 (0.61)
Dry period 2 (2007-09)	0.007 (0.11)	0.028 (0.19)	-0.042 (-0.21)	-0.001 (-0.06)
ER x Dry period 1 (2001-02)	-0.471 (-2.14)**	-0.478 (-2.41)**	-0.475 (-2.14)**	-0.404 (-2.37)**
ER x Wet period 2 (2003-06)	-0.246 (-1.09)	-0.251 (-1.02)	-0.238 (-1.06)	-0.119 (-0.37)
ER x Dry period 2 (2007-09)	-0.022 (-0.08)	-0.021 (-0.06)	0.064 (0.34)	0.112 (0.47)
Depth to groundwater	-0.038 (-1.74)*	-0.045 (-2.03)**	-0.023 (-2.03)**	-0.041 (-1.74)*
ER x Depth to groundwater	-0.020 (-0.31)	-0.017 (-0.31)	-0.018 (-0.33)	-0.019 (-0.30)
Depth to groundwater, CV (or SD)	-0.468 (-1.06)	0.781 (0.36)	-0.074 (-0.95)	-0.033 (-0.62)
ER x Depth to groundwater, CV (or SD)	0.429 (0.62)	-0.870 (-0.39)	-0.069 (-0.85)	0.144 (0.29)
Orchard/vineyard cropland share	-0.141 (-0.74)	-0.147 (-0.74)	-0.116 (-0.21)	-0.151 (-1.05)
ER x Orchard/vineyard cropland share	0.290 (1.28)	0.297 (1.30)	0.271 (1.22)	0.309 (1.35)
Idle cropland share	0.080 (0.52)	0.094 (0.52)	0.109 (0.52)	0.079 (0.45)
ER x Idle cropland share	-0.124 (-0.37)	-0.146 (-0.42)	-0.187 (-0.54)	-0.057 (-0.11)
Number of nearest wells in inverse distance weighting	10	5	5	5
Volatility represented by CV or SD?	CV	CV	SD	SD
Number of prior years in CV/SD calculation	5	10	5	10
Number of JAS segments	128	128	128	128
Number of JAS segment-years	425	425	425	425
Weighted sample size	83,908	83,908	83,908	83,908

Note: The dependent variable is the logged real per-acre land value (in \$2009). The asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels. All models contain JAS segment fixed effects. T-statistics generated by clustering standard errors by county and district membership using the wild t-bootstrap approach outlined in Cameron et al. (2008) are presented in parentheses.

Appendix Table A3. Robustness checks for irrigation district members subsample

	(1)	(2)	(3)	(4)
Dry period 1 (2001-02)	0.093 (0.48)	0.108 (1.52)	0.068 (0.48)	0.104 (0.48)
Wet period 2 (2003-06)	0.266 (0.89)	0.284 (1.52)	0.255 (1.52)	0.278 (0.49)
Dry period 2 (2007-09)	0.174 (0.88)	0.205 (0.88)	0.127 (0.88)	0.186 (0.88)
ER x Dry period 1 (2001-02)	-0.426 (-2.09)**	-0.417 (-2.27)**	-0.456 (-2.18)**	-0.450 (-2.61)***
ER x Wet period 2 (2003-06)	-0.367 (-1.05)	-0.361 (-0.99)	-0.392 (-1.24)	-0.410 (-0.97)
ER x Dry period 2 (2007-09)	-0.121 (-0.44)	-0.132 (-0.55)	-0.057 (-0.21)	-0.169 (-0.73)
Depth to groundwater	-0.034 (-0.88)	-0.040 (-0.88)	-0.020 (-0.88)	-0.036 (-0.15)
ER x Depth to groundwater	0.036 (0.54)	0.028 (0.33)	0.018 (0.26)	0.031 (0.28)
Depth to groundwater, CV (or SD)	-0.164 (-0.48)	0.751 (0.16)	-0.061 (-0.48)	0.006 (0.16)
ER x Depth to groundwater, CV (or SD)	-0.857 (-0.77)	-1.080 (-0.52)	-0.124 (-1.44)	-0.099 (-0.61)
Orchard/vineyard cropland share	-0.134 (-0.16)	-0.136 (-0.16)	-0.106 (-0.16)	-0.134 (-0.16)
ER x Orchard/vineyard cropland share	0.244 (0.75)	0.237 (0.71)	0.196 (0.53)	0.226 (0.74)
Idle cropland share	0.197 (0.15)	0.219 (0.15)	0.236 (0.15)	0.210 (0.15)
ER x Idle cropland share	0.082 (0.19)	0.055 (0.13)	-0.015 (>-0.001)	-0.028 (>-0.001)
Number of nearest wells in inverse distance weighting	10	5	5	5
Volatility represented by CV or SD?	CV	CV	SD	SD
Number of prior years in CV/SD calculation	5	10	5	10
Number of JAS segments	82	82	82	82
Number of JAS segment-years	270	270	270	270
Weighted sample size	48,392	48,392	48,392	48,392

Note: The dependent variable is the logged real per-acre land value (in \$2009). The asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels. All models contain JAS segment fixed effects. T-statistics generated by clustering standard errors by county and district membership using the wild t-bootstrap approach outlined in Cameron et al. (2008) are presented in parentheses. A table entry listed as ">-0.001" denotes a negative value in the (-0.001, 0) interval.

Appendix Table A4. Robustness checks for irrigation district non-members subsample

	(1)	(2)	(3)	(4)
Dry period 1 (2001-02)	-0.013 (-0.61)	-0.027 (-0.61)	-0.053 (-3.09)***	-0.061 (-0.61)
Wet period 2 (2003-06)	-0.111 (-0.61)	-0.126 (-0.61)	-0.123 (-0.61)	-0.116 (-0.61)
Dry period 2 (2007-09)	-0.308 (-3.09)***	-0.359 (-3.09)***	-0.345 (-3.09)***	-0.375 (-3.09)***
ER x Dry period 1 (2001-02)	-0.456 (-0.95)	-0.434 (-1.10)	-0.434 (-0.93)	-0.236 (-0.71)
ER x Wet period 2 (2003-06)	0.036 (0.14)	0.081 (0.32)	0.044 (0.52)	0.319 (0.55)
ER x Dry period 2 (2007-09)	0.219 (1.02)	0.303 (1.66)*	0.261 (1.02)	0.585 (0.99)
Depth to groundwater	-0.028 (-0.65)	-0.025 (-0.05)	-0.019 (-0.65)	-0.019 (-0.05)
ER x Depth to groundwater	-0.110 (-1.87)*	-0.098 (-1.34)	-0.104 (-1.76)*	-0.080 (-1.55)
Depth to groundwater, CV (or SD)	-0.798 (-0.61)	5.077 (0.65)	-0.068 (>-0.001)	0.387 (0.65)
ER x Depth to groundwater, CV (or SD)	0.756 (0.03)	-3.889 (-0.52)	0.063 (0.28)	-0.122 (-0.28)
Orchard/vineyard cropland share	-0.179 (-0.65)	-0.198 (-0.65)	-0.150 (-0.65)	-0.177 (-0.65)
ER x Orchard/vineyard cropland share	0.606 (2.41)**	0.648 (2.41)**	0.591 (2.41)**	0.503 (2.41)**
Idle cropland acreage	-0.535 (-0.65)	-0.529 (-0.65)	-0.519 (-0.65)	-0.478 (-3.09)***
ER x Idle cropland acreage	0.353 (0.68)	0.371 (0.74)	0.349 (0.73)	0.304 (0.65)
Number of nearest wells in inverse distance weighting	10	5	5	5
Volatility represented by CV or SD?	CV	CV	SD	SD
Number of prior years in CV/SD calculation	5	10	5	10
Number of JAS segments	46	46	46	46
Number of JAS segment-years	155	155	155	155
Weighted sample size	35,516	35,516	35,516	35,516

Note: The dependent variable is the logged real per-acre land value (in \$2009). The asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels. All models contain JAS segment fixed effects. T-statistics generated by clustering standard errors by county and district membership using the wild t-bootstrap approach outlined in Cameron et al. (2008) are presented in parentheses. A table entry listed as ">-0.001" denotes a negative value in the (-0.001, 0) interval.

Appendix Table A5. Present discounted value of revenue (per-acre) from water sales by district farmers

Discount rate	Landowner's Water Sale Frequency		
	Every 3rd year	Every 4th year	Every 5th year
0.02	\$9,751	\$7,385	\$5,966
0.03	\$6,628	\$5,044	\$4,094
0.04	\$5,067	\$3,874	\$3,158
0.05	\$4,131	\$3,172	\$2,598
0.06	\$3,507	\$2,705	\$2,225
0.07	\$3,062	\$2,372	\$1,960