

Economic Effects from Reduced Irrigation

Republican Basin Options & Consequences

Prepared by
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AGRICULTURAL WATER MANAGEMENT



Economic Effects Will Depend On

- **Crop prices: Compare Old v. New**
 - Old: Corn=\$2.40; GS=\$2.30; SB=\$5.50; W=\$3.50
 - New: Corn=\$3.50; GS=\$3.40; SB=\$6.50; W=\$4.50
- **Policy option: Use DNR 15-25 Plan**

– Regulation levels	Upland	QR Wells
– URNRD	11.3	6.4
– MRNRD	8.4	5.9
– LRNRD	8.1	4.6



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Farm Level Cost of 15-25 Plan Using New Prices Before and After Regulations

- Effect of average net returns, \$/Acre

– NRD	Upland	QR Wells
– URNRD	-\$49	-\$139
– MRNRD	-\$53	-\$148
– LRNRD	-\$73	-\$148
- Implications
 - Cost for QRW is 2 to 2.5 times upland cost
 - Unfortunately, in short term QR cutbacks are essential but upland cutbacks are not.



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Farm Level Cost of 15-25 Plan Using Old Prices Before and New Prices After Regulations

- Effect on average net returns, \$/Acre

– NRD	Upland	QR Wells
– URNRD	+\$143	+\$38
– MRNRD	+\$125	+\$47
– LRNRD	+\$73	+\$61
- Implications
 - Economic returns under proposed regulations are higher for everyone compared to historical average.
 - QRW profit far less from new prices compared to upland wells.



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Upland Tax Required to Equalize the Pain Using New Prices

	Average Cost	Equalizing Tax
URNRD	\$60	\$11
MRNRD	\$83	\$29
LRNRD	\$106	\$32

Note: The equalizing tax is the fee which would have to be collected from upland irrigators and paid to QR irrigators in order so that each bears the same burden in \$/Acre, for the 15-25 Plan.



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Off Farm Economic Effects of 15-25 Plan (In Short-run with \$3.50 Corn)

- Net farm income with 15-25 plan will be higher for everyone under new prices compared to historical case.
- Crop price increases for crops produced on 1.375 M. dryland acres will contribute to healthy regional economy.
- About 20% of irrigated acres will revert to dryland resulting in fewer farm input sales, but primary impact will be on N and on energy for irrigation pumping.



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Off Farm Economic Effects of 15-25 Plan (In Long-Run with \$?? Corn)

- Impact is substantially dependent on unknown future grain prices.
 - If biofuels sustain an average corn price of near \$3.00 until drought shortfall is corrected (perhaps 5 years), the Basin economy should be better than historical.
 - If not, options to sustain regional economy include: temporary reductions in upland regulations and/or state payments.
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Based on Table \$ Usding IMP Planning Acreage - converting to certified and figuring inches acre with 15/25 are 1.5 times inches per qcre with 15/50.

Mid range QR volumes

UR	13000-260	19,500
MR	20000-400	30,000
LR	24000-480	36,000

Prorating Acres to Certified Acres in MRNRD and LRNRD

	IMP Acres			Acres in QR	
	IMP	Certified Acres		IMP	Cert
URNRD	455000	455000	1	55000	55000
MRNRD	290000	312000	1.075862	90000	96,828
LRNRD	277000	325000	1.173285	120000	140,794

Inches Per acre pumped in QR at 15/50 = Inches Per acre pumped QR at 15/25
 Volume in QR/new acres

URNRD	4.25	6.381818	
MRNRD	3.72	5.576923	Ray - 5.9
LRNRD	3.07	4.602462	

per