

Analysis of the URNRD Draft Integrated Management Plan

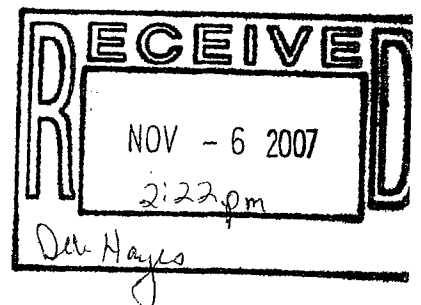
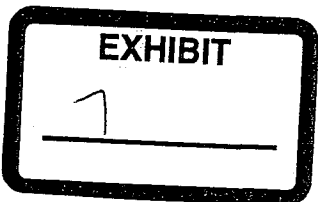
Attached is the draft IMP. The key sections are highlighted in yellow. The plan does the following things:

1. Creates a five year agreement with the State that can be altered at any time.
2. Commits the URNRD to reduce pumping to a target of 425,000 acre feet.

YEAR	URNRD	5 Yr Running Average	Over or under allowed pumping	Acres Inches Used
Average Allowed			425,000	11.4
1980	396,933			
1981	335,795			
1982	274,796			
1983	341,737			
1984	434,616	356,775	68,225	11.6
1985	444,601	366,309	58,691	11.9
1986	395,741	378,298	46,702	10.6
1987	364,513	396,242	28,758	9.8
1988	412,179	410,330	14,670	11.0
1989	405,483	404,503	20,497	10.8
1990	505,015	416,586	8,414	13.5
1991	463,137	430,065	(5,065)	12.4
1992	334,973	424,157	843	9.0
1993	256,709	393,064	31,936	6.9
1994	494,951	410,957	14,043	13.2
1995	439,376	397,829	27,171	11.8
1996	328,475	370,897	54,103	8.8
1997	489,546	401,811	23,189	13.1
1998	503,415	451,153	(26,153)	13.5
1999	380,234	428,209	(3,209)	10.2
2000	663,490	473,032	(48,032)	17.7
2001	466,841	500,705	(75,705)	12.5
2002	644,833	531,763	(106,763)	17.2
2003	560,165	543,113	(118,113)	15.0
2004	468,435	560,753	(135,753)	12.5
2005	430,000	514,055	(89,055)	11.5
2006	425,000	505,687	(80,687)	11.4
2007				

Averages	Actual	Allowed	Acres Inches
1990-2006	462,035	425,000	12.4
1998-2006	504,713	425,000	13.5
2000-2006	522,681	425,000	14.0
2004-2006	441,145	425,000	11.8

Red out of target range. Black in target range.



3. Commits the URNRD to keep net stream depletions below 71,161 acre feet a year. This can be done by reducing pumping or increasing the flow by increasing the supply.

Modeled Depletions by NRD

	Upper	Middle	Lower	3 NRD Total	NRDs over or under allowed usage	State overage (after NRD compliance)
Average Allowed	71,161	52,168	43,954	70,283		
1980	49,489	49,415	33,882	132,786	37,497	good
1981	51,470	43,500	33,622	128,592	41,691	good
1982	47,847	33,608	32,733	114,188	56,095	good
1983	51,959	44,077	35,148	131,184	39,099	good
1984	56,100	49,317	39,585	145,002	25,281	good
1985	54,050	42,581	33,961	130,592	39,691	good
1986	57,538	47,717	35,634	140,889	29,394	good
1987	57,919	42,415	34,997	135,331	34,952	good
1988	57,800	40,448	34,639	132,887	37,396	good
1989	61,742	45,675	36,231	143,648	26,635	(30,490)
1990	64,826	49,433	37,990	152,249	18,034	good
1991	67,036	57,818	39,886	164,740	5,543	(38,147)
1992	74,053	56,861	43,157	174,071	(3,788)	(4,247)
1993	62,647	41,397	42,044	146,088	24,195	good
1994	71,320	53,840	48,321	173,481	(3,198)	good
1995	81,183	69,168	48,004	198,355	(28,072)	good
1996	69,794	49,404	46,155	165,353	4,930	good
1997	72,889	48,653	43,929	165,471	4,812	good
1998	80,522	60,444	44,387	185,353	(15,070)	good
1999	73,692	42,920	44,631	161,243	9,040	good
2000	83,435	65,087	45,852	194,374	(24,091)	(5,959)
2001	85,157	58,381	48,514	192,052	(21,769)	good
2002	79,052	50,528	48,993	178,573	(8,290)	(27,433)
2003	80,681	56,984	50,103	187,768	(17,485)	(7,730)
2004	82,314	64,639	56,050	203,003	(32,720)	(3,920)
2005	77,860	53,738	47,714	179,312	(9,029)	(33,289)
2006	82,813	62,424	51,297	196,534	(26,251)	(6,123)
2007				-		

Modeled Depletions by NRD

Averages	Upper	Middle	Lower	Upper	Middle	Lower	3 NRD Total
1990-2006	75,840	55,395	46,296	(1,679)	(3,227)	(2,342)	(7,248)
1998-2006	80,614	57,238	48,616	(6,453)	(5,070)	(4,662)	(16,185)
2000-2006	81,616	58,826	49,789	(7,455)	(6,658)	(5,835)	(19,948)
2004-2006	80,996	60,267	51,687	(6,835)	(8,099)	(7,733)	(22,667)

The IMP does not define what period of time will be used for averages to measure compliance. If an eight year average such as, 1998-2006, were used, then the URNRD would need to reduce depletions by 6,453 acre feet a year.

Some have suggested that this IMP will not require a reduction in allocation because we are already pretty close to the 425,000 acre feet of pumping and 74,161 acre feet of deletions are. You can compare the numbers for yourselves to see if that is accurate.

Note, the source for the numbers used in this analysis come from an open records request made of the DNR. I have been unable to get the information from the URNRD.

4. From Section VII paragraph 1. If it is determined by NDNR and the URNRD that all of the Districts in the basin have met their proportional share of responsibility, but Nebraska is nonetheless out of compliance with the RRSA, further reductions in net depletions will be necessary. Any further reduction in net depletions will be based on the same proportions as contained in the 1998-2002 baseline depletion percentages.

This paragraph is vague as to what the NRD obligation is if the State is out of compliance even if the URNRD lives within the allocations of 425,000 acre feet of pumping and 71,161 acre feet of depletions. This is the primary point of argument with the State. The State will argue that the NRD, in this paragraph, has agreed to be responsible for keeping the State in compliance even if the NRD is within its allocation. The NRD will argue the opposite. This paragraph has undergone many significant changes. As it is a very vague paragraph, it is likely that an outside party, such as a judge, will determine what is meant.

The numbers below are the depletions each NRD would be responsible for eliminating. The top set is if the NRDs are responsible for only the depletions listed in this IMP. The next set show what the responsibility would be if the NRDs are also responsible for eliminating the State overage as well.

NRD responsible for NRD depletions only.	3 NRD				
	Averages	Upper	Middle	Lower	Total
	1990-2006	(1,679)	(3,227)	(2,342)	(7,248)
	1998-2006	(6,453)	(6,070)	(4,662)	(16,185)
	2000-2006	(7,455)	(6,658)	(5,835)	(19,948)
	2004-2006	(6,835)	(8,099)	(7,733)	(22,667)

NRD responsible for NRD and State depletions.	3 NRD				
	Averages	Upper	Middle	Lower	Total
	1990-2006	(1,679)	(3,227)	(2,342)	(7,248)
	1998-2006	(6,588)	(5,162)	(4,741)	(16,491)
	2000-2006	(10,001)	(8,394)	(7,339)	(25,734)
	2004-2006	(13,190)	(12,432)	(11,488)	(37,111)

The difference between the two variations is likely to be measured in the millions of dollars.

This shows what the State would be over by, even if the NRDs had lived within combined 170,283 acre feet listed in this IMP each year. What is at stake is who pays for the cost of adjusting for these extra-NRD overages.

Year	State overage (after NRD compliance)	State overage (after NRD compliance)	5 Year Running Average
1980			
1981	(17,249)		
1982	35,520		
1983	119,944		
1984	93,525		
1985	16,029	49,554	
1986	1,700	53,343	
1987	40,938	54,427	
1988	(20,303)	26,378	
1989	(30,490)	1,575	
1990	(17,189)	(5,069)	
1991	(38,147)	(13,038)	
1992	(4,247)	(22,075)	
1993	111,238	4,233	
1994	57,871	21,905	
1995	72,997	39,943	
1996	129,409	73,454	
1997	16,550	77,613	
1998	40,667	63,499	
1999	(2,916)	51,341	
2000	(5,959)	35,550	
2001	43,950	18,458	
2002	(27,433)	9,662	
2003	(7,730)	(18)	
2004	(3,920)	(218)	
2005	(33,289)	(5,684)	
2006	(6,123)	(15,699)	

Averages - State Overage	
1990-2006	19,161
1993-2006	(306)
2000-2006	(5,786)
2004-2006	(14,444)

5. The IMP permits an NRD to comply with the target allocation however it wants to do so. The allocations permitted to the farmer are not specified in this document. The options open to the NRD are:

- a. Reducing pumping
- b. Buying surface water
- c. Augmenting the stream

a. Compliance via reducing pumping – For every 10,000 acres of irrigation that is completely shut off, then the following benefit to the stream is gained.

Year	Reduction in depletions for For Every 10,000 Acres		Acres off to comply Upper
	QR	Upland	
1	374	43	(172,756)
2	640	6	(100,819)
3	867	18	(74,454)
4	1,090	51	(59,179)
5	1,351	85	(47,771)
5 Yr Avg	1,864	35	(74,661)
10 Yr Avg	1,152	102	(56,015)
20 Yr Avg	1,383	253	(46,650)
40 Yr Avg	1,479	504	(43,622)

The numbers in red are the numbers of quick response acres that would need to be shut off to cause an average reduction of 6,453 acre feet for the URNRD. There are a total of 88,000 quick response acres in the URNRD. As this shows, even a 100% reduction in pumping on all wells will not put enough water in the stream to do what is required. There are simply not enough acres that can be shut off to get what is needed.

A 5% reduction in acres or pumping provides a nearly meaningless benefit to the stream in the time frame required. The point is that compliance cannot be achieved via reductions alone, unless one is willing to shut off a large number of wells for multiple years. However, this is the only option that appears Kansas is willing to accept.

b. Buying surface water – There is enough surface water for the NRDs and the State to purchase 95% of the time to keep the NRDs and the State in compliance. However, there are several potential problems.

- i. Who pays the surface irrigator? Under LB 701, the current arrangement assumes the State and the NRDs will pay about 50% each during 2007 but that, in the future, the NRDs will pay at least 95% of the cost. Is there enough money to satisfy the sellers especially if commodity prices stay high?

- ii. What happens if the cost of water is more than what the NRDs are permitted to collect in taxes? If the surface irrigation districts decide to plant their crops instead of sell their water, what alternatives are there? This is very possible and even likely considering the lawsuit that is blocking payment for the 2007 water. Current law does not force the water to be sold at a price that can be paid. If the NRDs are responsible for the State's share of overage, then the NRDs are in a no-win position. In contrast, if the State is responsible for their share of the overage, then the State is likely to force a sale of surface water at market price.
 - c. Augmenting the stream. – This can be done by importing water into the Basin or by taking water from a future generation and pumping it into the stream. To date, this concept has been rejected, as options A and B are preferred by the decision makers.
6. Section IX 6 – “At this time, due to the already limited availability of surface water supplies, the NDNR will not require that surface water appropriators apply or utilize additional conservation measures or that they be subject to other new restrictions on surface water use, except as may be necessary to meet the goals and objectives of this plan and to maintain compliance with the compact.”

This is the same language that was in the previous IMP. This permits the surface irrigator to divert any water put into the stream by an NRD. Thus, an NRD would have to continue to put water into the stream until the surface irrigator needed no more water and, then, begin to add water for compliance with Kansas. Combined with a requirement to make up anything the State's is over makes this a potential failure point.

7. An example of a worst case scenario: The reservoirs are full. Prices are high. The year turns out to be dry. Two of the three are true for 2008. If 2008 turns out to be a year with a low allocation (we won't know until 2009), then we have the potential for a huge disaster. Surface usage jumps because the water is there. Surface irrigation districts decide they can make more money raising a crop than accepting the maximum cash the NRDs can pay. If those things happened, then Nebraska would be very far out of compliance, and there is nothing the NRDs could do to protect themselves from complete failure. Will this happen? Hopefully not. Could it happen? Yes.

The current language in the IMP, as shown in #4 here, is not clear as to who is responsible. Nor does current law permit the NRD to cause a sale of surface water. Nor are there any plans in place to augment the stream if the above two options are not available. Will the worst case scenario happen? A lot depends on the attitude of the surface irrigation districts. We know that some of the surface irrigators are very hostile to groundwater irrigation and want to see it severely curtailed even if it costs them in the process. Will these individuals be in a position to block the sale of water? Does this IMP help protect against this threat?

In summary

1. This IMP could be improved if the paragraph detailing what happens if the NRD is in compliance but the State is still out of compliance were clarified and the water the NRDs put into the stream is protected from diversion.
2. This IMP will require a reduction in pumping. The average pumping in the URNRD varies depending on which set of years are used for the average but all combinations are higher than the 11.4 the URNRD is agreeing to. Statements that we are already there are not correct. This IMP does not identify how these reductions in average pumping will be achieved. However, increasing the supply is not an option. Only cuts are an option.
3. In addition to reducing pumping, the IMP requires the URNRD to live within a 74,161 acre of depletions to the stream. The NRD may decrease use or increase supply to accomplish this. Decreasing use has extremely limited effect in the short term and only the wells close to the stream have any significant effect with the next decade. Therefore the only practical way for the URNRD to comply with this requirement is to purchase surface water or import water.
4. If the surface irrigators choose to not sell their water to the NRD or State then in some years the NRDs will fail to stay within their allowed depletions. Many surface irrigators are saying they will not sell their 2008 water to the State or NRDs. If the NRDs cannot access surface water for compliance purposes for whatever reason then the NRDs will frequently fail to comply with the IMP and have no options except to shut down wells, augment the stream or import water.

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My name is Jim Cooper; I am a 4th generation farmer on a Perkins County farm, the first parcel was purchased by my great grandfather in 1904. My father drilled our first irrigation well in 1968. We have participated in many NRD and state programs to increase our irrigation efficiency. Our irrigation is all pivots, all have drops, and some still have end guns. I represent myself, and my family interests under the entities of Jim Cooper, R 2, Inc., Elmer Cooper and Cooper Farms LTD.

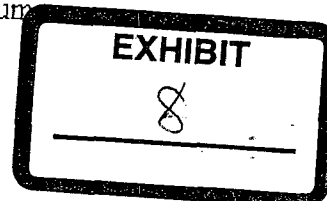
In listening to opinions from DNR, the governors' office, Bureau of Reclamation, etc., my conclusion is that in the eyes of these people and agencies the easiest solution to KS lawsuit compliance is to label it a "farmer problem" and force us as farmers and our communities to bear the full burden of compliance.

We hold the following views:

- Lawsuit compliance is a State issue. We as individual irrigators had no say in the settlement terms. Irrigation is vital to the basin's economy and in turn the State economy.
- Drought was/is the biggest factor in reducing stream flows.
- The world has changed since the date when the compact was signed and implementation of the compact in 2007 has no resemblance to its original intent.
- Movement of underground water is very complex and predictions by "models" are an educated guess at best. There is no guarantee that further pumping restrictions on our farm would add any stream flow to the Republican in the next 50 years.
- Farming has changed allowing less runoff into stream alluvial through conservation tillage, no-til, strip-til, etc., by more surface residue, building soil organic matter and increasing rainfall infiltration rates. These same practices reduce irrigation requirements.
- Dams and irrigation projects on the Republican, while highly beneficial in many ways, have prevented "cleansing" of plant growth in the stream valley that has occurred since the compact was signed.
- The Upper Republican NRD has been a pioneer in many irrigation developments and took the lead in conservation with allocations, drilling restrictions and moratoriums. These actions should receive due credit from the State.

We support the following:

- Purchases of water from other basins.
- Removal of plant life from river valleys.
- Efforts regarding counter suits to amend compliance terms.
- Further efforts to increase irrigation efficiencies.
- Floating Townships with regard to pooling.
- Further reductions in allocations, only if needed, down to 10 inches.
- Studies to determine additions of irrigated acres after drilling restrictions and moratoriums, which includes but is not limited to satellite pivots, in the Upper Republican NRD defeating the intent of such restrictions and moratoriums.



We oppose the following:

Reductions in irrigated acres.

Forced removal of end guns.

Industrial uses of ground water that do not require full offset.

Jim Cooper

