

Attachment 1 Wyoming Depletions Report – Water Year 2011

1. Existing Water Related Activities – Baseline No. 1

1.1. Compliance with the Modified North Platte Decree

Wyoming complied with the Modified Decree as per the intentionally irrigated acreage report submitted to the NPDC on February 10, 2012. The intentionally irrigated acreage was 203,599 acres for the sub-basin above Guernsey Reservoir. Irrigation water use in the Benchmark No. 1 sub-basins appears in *Attachment 2 – Table 2.1*.

1.2. Kendrick Project

The Kendrick Project did not exceed the acreage limitation of 24,249 acres. In a letter received on February 27, 2012 from Mr. Lyle Myler, Bureau of Reclamation Acting Area Manager, he indicated that the Casper-Alcova Irrigation District reported the area irrigated as 24,249 for WY 2011.

1.3. Mitigation

No mitigation is required.

2. Existing Water Related Activities – Baseline No. 2

2.1. Annual Water Use versus Benchmarks

Irrigation water use in the Benchmark No. 2 sub-basins appears in *Attachment 2 – Table 2.2*. Since the Horse Creek sub-basin irrigation has no affect on depletions at the State Line during the irrigation season, irrigated acres in this sub-basin were not counted in WY 2011.

Attachment 2 – Table 2.4 compares the WY 2011 water use with the benchmarks. The irrigation, municipal, industrial, rural domestic, retired/mitigation uses, and post-1997 new water uses are included in each respective row.

The sources of the rural domestic population data is the State of Wyoming Department of Administration and Information and the U.S. Census Bureau 2010 Census. The rural domestic use is based upon 2009 populations, which are the most current data available. The municipal population totals are based on the 2010 Census.

Attachment 2 – Table 2.4 Column 5 includes water right abandonments derived from searching the Wyoming Board of Control records for permanently retired irrigation water uses between 2005 – 2008. In the Pathfinder to Guernsey sub-basin, the records were searched back to 1998.

Additionally in *Table 2.4 Column 5*, the non-irrigation season overruns from municipalities and industries above Guernsey Dam have been offset

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by the agriculture underruns tabulated from Guernsey Dam to the state line. Due to the intervening reservoirs on the North Platte River, the effects of the depletions resulting from the basins above Guernsey Dam in both the irrigation and non-irrigation seasons arrive at the Guernsey to State Line reach during the irrigation season. Therefore, any municipal and industrial overruns above Guernsey Dam can be offset by agriculture underruns in the Guernsey Dam to State Line portion of the North Platte River basin (*Wyoming Depletions Plan – Attachment No. 1, page 4, October 24, 2006*).

2.2. Mitigation

After the overruns and underruns are translated to the state line, the net effect is an underrun for both the irrigation season and the non-irrigation season. No mitigation is required.

3. South Platte River Basin – Baseline No. 3

For WY 2011, there was no increase or decrease in acre-feet of storage in the South Platte Basin in Wyoming. The 1997 to 2010 total was 36.29 acre-feet, and with no increase or decrease in storage, the reported storage total for WY 2011 remains at 36.29 acre-feet. All of these facilities are small ponds for stock, wildlife, fish propagation, or environmental purposes. The cumulative effect of these facilities does not affect flows at the Wyoming / Colorado state line during a large runoff event.

4. Proposed Changes to Benchmarks

At this point in time, Wyoming has no plans to propose changes to the benchmarks.

5. New Water Related Activities

5.1. In *Attachment 2 – Table 2.3*, Wyoming reports by sub-basin the new water related activities commencing during Water Year 2011 that are covered by existing water related Baseline No. 2 in Wyoming's Depletions Plan. *Table 2.3* also includes the total number of new water related activities implemented since 1997. This post-1997 total is integrated into Column 6 of *Table 2.4* and contributes to the overruns/underruns that occur.

The new water related activities completed during Water Year 2011 were small in number and volume. The estimated net depletion/accretion of the small ponds and new or enlarged wells are 0.67 acre-feet depletion during the irrigation season and 0.34 acre-feet depletion during the non-irrigation season.

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Industrial and municipal water use during WY 2011 remained constant to past years use.

6. Non-hydrologically Connected Groundwater Wells

During WY 2011, there were no new groundwater well applications submitted to the SEO which requires the approval of the Groundwater Wells Subcommittee (GWSC) of the NPDC. Therefore, no new non-hydrologically connected groundwater wells were permitted in areas considered to be hydrologically connected.

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Table 2.1.
Existing Water Related Baseline No. 1

Decree Category	Benchmark Acreage	2011 Acreage	Difference Acreage
Irrigated Acreage - Ab. Gu.	226,000	203,599	22,401
Irrigated Acreage - Kendrick	24,249	*	
* At or less than 24,249 acres			

Table 2.2
Existing Water Related Baseline No. 2 – Irrigation Water Use

Sub-basin	Acreage Benchmark	2011 Acreage	Overruns (Underruns)	Unit C.U.	Overruns (Underruns)
	(acres)	(acres)	(acres)	(af/acre)	(acre-feet)
Guernsey-State Line	106,221	78,389	-27,832	1.32	-36,738.24
Horse Creek	41,179	*		1.16	
Upper Laramie	91,255	80,294	-10,961	0.79	-8,659.19
Lower Laramie	85,711	64,095	-21,616	1.31	-28,316.96
Total	324,366	222,778	-60,409		-73,714.39
* Since Horse Ck. sub-basin depletions have no affect on depletions at the State Line during the irrigation season irrigated acres were not counted in WY 2011.					

Table 2.3
Total Depletions from New Water Activities – Post 1997

Sub-basin	Irrigation Season			Non-Irrigation Season		
	97 to 10	WY 2011	Total	97 to 10	WY 2011	Total
	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)
Above Pathfinder	117.49	0.00	117.49	30.05	0.00	30.05
Pathfinder to Guernsey	-6.96	0.67	-6.29	52.87	0.34	53.21
Guernsey to State Line	45.82	0.00	45.82	31.74	0.00	31.74
Horse Creek	38.22	0.00	38.22	26.11	0.00	26.11
Upper Laramie	10.75	0.00	10.75	8.65	0.00	8.65
Lower Laramie	58.73	0.00	58.73	29.27	0.00	29.27
Total	264.05	0.67	264.72	178.69	0.34	179.03

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Table 2.4.
Water Year 2011 Overruns / Underruns

Sub-basin	Table 2.4 - Irrigation Season - Overruns / Underruns AF							Tracking Factors Table I	Effects State Line (AF)
	Irrigation Use	Municipal Use	Industrial Use	Rural Domestic	Retired / Mitigation	Post 1997 Activities	Total		
	1	2	3	4	5	6	7	8	9
Above Pathfinder	-----	-772.29	164.22	-200.73	-1.29	117.49	-692.61	0.90	-623.35
Pathfinder to Guernsey	-----	-176.31	-2,298.20	98.07	-40.90	-6.29	-2,423.63	0.98	-2,363.04
Guernsey to State Line	-36,738.24	-1,033.19	-11.85	-73.00	237.06	45.82	-37,573.40	1.00	-37,573.40
Horse Creek	-----	-5.58	0.00	-25.00	-1.95	38.22	5.69	0.00	0.00
Upper Laramie	-8,659.19	-783.80	0.00	-112.47	-0.79	10.75	-9,545.50	0.25	-2,386.37
Lower Laramie	-28,316.96	-60.69	0.00	-50.73	-0.62	58.73	-28,370.27	0.50	-14,185.14
WY 2011 Total	-73,714.39	-2,831.86	-2,145.83	-363.87	191.51	264.72	-78,599.72		-57,131.30

Sub-basin	Table 2.4 - Non-Irrigation Season - Overruns / Underruns AF							Tracking Factors Table II	Effects State Line (AF)
	Irrigation Use	Municipal Use	Industrial Use	Rural Domestic	Retired / Mitigation	Post 1997 Activities	Total		
	1	2	3	4	5	6	7	8	9
Above Pathfinder	-----	-406.19	183.46	-100.37	-184.40	30.05	-477.44	0.93	-444.02
Pathfinder to Guernsey	-----	22.25	-2,818.53	49.03	-148.30	53.21	-2,842.34	1.00	-2,842.34
Guernsey to State Line	-----	-317.35	81.86	-31.50	0.00	31.74	-235.25	1.00	-235.25
Horse Creek	-----	-31.86	0.00	-12.50	0.00	26.11	-18.25	1.00	-18.25
Upper Laramie	-----	-159.80	0.00	-51.23	0.00	8.65	-202.38	0.50	-101.19
Lower Laramie	-----	-42.76	0.00	-25.37	0.00	29.27	-38.86	1.00	-38.86
WY 2011 Total	-----	-935.71	-2,553.21	-171.93	-332.70	179.03	-3,814.52		-3,679.91