

Attachment 1

Wyoming's Water Year 2009 Depletions Report

1. Existing Water Related Activities – Baseline No. 1

1.1. Compliance with the Modified North Platte Decree

Wyoming complied with Modified Decree as per the intentionally irrigated acreage report submitted to the NPDC on February 25, 2010. The intentionally irrigated acreage was 204,138 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 24,248 acres. In a letter received on March 11, 2010 from Mr. John Lawson, Bureau of Reclamation Area Manager, he indicated that the Casper-Alcova Irrigation District reported the area irrigated as 24,248 for WY 2009.

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 2009.

Attachment 2 – Table 2.4 compares the WY 2009 water use with the benchmarks. The irrigation, municipal, industrial, rural domestic, retired uses, and post-1997 new water uses are included in each respective row.

The source of the rural domestic population data is the State of Wyoming Department of Administration and Information. The rural domestic use is based upon 2008 populations, which are the most current data available.

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.

2.2. Mitigation

After the overruns and underruns are translated to the State line, the net effect is an underrun of 58,997 acre-feet for the irrigation season and 3,026 acre-feet for the non-irrigation season. No mitigation is required.

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3. South Platte River Basin – Baseline No. 3

For WY 2009, the total increase in acre-feet of storage in the South Platte Basin in Wyoming is 0.85 acre-feet. The 1997 to 2008 total was 35.32 acre-feet, and with the increase from WY 2009, the post-1997 storage developed in the South Platte River basin is 36.17 acre-feet. All of these facilities were small ponds for stock, wildlife, fish propagation, or environmental purposes. The cumulative effect of these facilities does not affect flows at the 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 2009 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 initiated during Water Year 2009 consist of small ponds and alluvial impoundments. For WY 2009, there were no new miscellaneous wells that were defined as a new water related activity. There have been increased depletions during the non-irrigation season resulting from the installation of stock ponds and fish/wildlife reservoirs, with the majority of these surface water facilities being permitted as an post-1997 constructed existing facility.

The small ponds are non-irrigation facilities that have capacities less than 20 acre-feet. The estimated net depletion/accretion of the small ponds and alluvial impoundments are 18.60 acre-feet accretion during the irrigation season and 7.30 acre-feet depletion during the non-irrigation season. The irrigation season accretions are due to the riparian plant community that existed prior to the facility construction has a greater consumptive use value than the evaporation of stored water that occurs from a facility following construction. An accretion in the Pathfinder to Guernsey subbasin is from an alluvial impoundment that was over-mitigated.

Our review of the baseline monitoring showed decreased depletions for industrial water users when compared to WY 2008, with the exception of

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the Dave Johnston Power Plant and the Western Sugar Cooperative. Municipal growth for Wyoming remained steady, with the greatest increase in population occurring in Douglas and Casper areas.

6. Non-hydrologically Connected Groundwater Wells

During Water Year 2008, the NPDC Groundwater Wells Subcommittee (GWSC) reviewed three applications to permit water from non-hydrologically connected sources. Wyoming's requests were submitted pursuant to Section II of the "Procedures Established by the Groundwater Wells Subcommittee for the Review of Wells in the Areas Defined by Exhibits 4 and 12 Concerning Hydrologically Connected Wells," as adopted by the NPDC on October 29, 2002. To the satisfaction of the GWSC, the groundwater produced from these separate applications does not meet the Modified North Platte Decree criteria for "hydrologic connection." At the April 14, 2009 NPDC meeting, the NPDC approved the GWSC report supporting the non-hydrologic connectivity of these groundwater wells. All three applications were permitted during Water Year 2009. The three Wyoming SEO permit numbers are: P189746W, P190170W, and P190171W. Any accretions associated with these non-hydrologically connected groundwater wells will be reported in future Wyoming Depletion's Reports.

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Table 2.1.
Existing Water Related Baseline No. 1

Decree Category	Benchmark Acreage	2009 Acreage	Difference Acreage
Irrigated Acreage-Ab. Gu.	226,000	204,138	21,862
Irrigated Acreage-Kendrick	24,248	*	
* Less than 24,248 acres			

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

Sub-basin	Acreage Benchmark	2009 Acreage	Overruns (Underruns)	Unit C.U.	Overruns (Underruns)
	(acres)	(acres)	(acres)	(af/acre)	(acre-feet)
Guernsey-State Line	106,221	78,865	-27,356	1.32	-36,109.92
Horse Creek	41,179	*		1.16	
Upper Laramie	91,255	92,362	1,107	0.79	874.53
Lower Laramie	85,711	60,141	-25,570	1.31	-33,496.70
Total	324,366	231,368	-51,819		-68,732.09
*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 2009.					

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Table 2.3.
Total Depletions from New Water Activities – Post 1997

Sub-basin	Irrigation Season			Non-Irrigation Season		
	97 to 08	WY 2009	Total	97 to 08	WY 2009	Total
	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)
Above Pathfinder	112.65	-0.10	112.55	25.88	0.10	25.98
Pathfinder to Guernsey	8.56	-16.20	-7.64	51.03	1.40	52.43
Guernsey to State Line	45.72	0.10	45.82	31.04	0.70	31.74
Horse Creek	38.22	0.00	38.22	26.11	0.00	26.11
Upper Laramie	12.95	-2.20	10.75	4.35	4.30	8.65
Lower Laramie	58.93	-0.20	58.73	28.47	0.80	29.27
Total	277.03	-18.60	258.43	166.88	7.30	174.18

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Table 2.4.
Water Year 2009 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 Uses	Post 1997 Activities	Total		
	1	2	3	4	5	6	7	8	9
Above Pathfinder	-----	-708.54	402.35	-160.00	-1.29	112.55	-354.93	0.90	-319.44
Pathfinder to Guernsey	-----	-2,080.79	-2,590.78	-61.00	-40.90	-7.64	-4,781.11	0.98	-4,661.58
Guernsey to State Line	-36,109.92	-1,089.04	62.42	-18.20	-95.64	45.82	-37,204.56	1.00	-37,204.56
Horse Creek	-----	3.29	0.00	-18.67	-1.95	38.22	20.89	0.00	0.00
Upper Laramie	874.53	-583.14	0.00	24.20	-0.79	10.75	325.55	0.25	81.39
Lower Laramie	-33,496.70	-326.89	0.00	-20.93	-0.62	58.73	-33,786.41	0.50	-16,893.21
WY 2009 Total	-68,732.09	-4,785.11	-2,126.01	-254.60	-141.19	258.43	-75,780.57		-58,997.40

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 Uses	Post 1997 Activities	Total		
	1	2	3	4	5	6	7	8	9
Above Pathfinder	-----	-43.19	481.27	-80.00	0.00	25.98	384.06	0.93	357.17
Pathfinder to Guernsey	-----	-224.63	-2,688.73	-30.50	0.00	52.43	-2,891.43	1.00	-2,891.43
Guernsey to State Line	-----	-112.70	-374.59	-4.10	0.00	31.74	-459.65	1.00	-459.65
Horse Creek	-----	-33.66	0.00	-9.33	0.00	26.11	-16.88	1.00	-16.88
Upper Laramie	-----	194.47	0.00	17.10	0.00	8.65	220.22	0.50	110.11
Lower Laramie	-----	-144.29	0.00	-10.47	0.00	29.27	-125.49	1.00	-125.49
WY 2009 Total	-----	-364.00	-2,582.05	-117.30	0.00	174.18	-2,889.17		-3,026.16