

STATE OF WYOMING



Wyoming Water Development Commission

Wyoming State Engineer's Office

MEMORANDUM

Date: March 15, 2008

To: Governance Committee (GC), Platte River Recovery Implementation Program (PRRIP)

From: Mike K. Purcell, State of Wyoming's Representative to the GC
Director, Wyoming Water Development Office
Patrick T. Tyrrell, State of Wyoming's Alternate Representative to GC
Wyoming State Engineer

Re: Interim Depletions Mitigation Plan and Water Year 2007 Depletions Report

This document is being provided pursuant to the PRRIP, Attachment 5, Section 7, and Paragraph II.B. of Wyoming's Depletions Plan, approved by the GC on October 24, 2006 and revised on April 10 and December 12, 2007. This report summarizes any new depletion that commenced between July 1, 1997 and the end of the Water Year 2007 (September 30, 2007).

Baseline No. 1

Wyoming has complied with the Modified North Platte Decree acreage limitations for the 2007 irrigation season. On February 29, 2008, Wyoming submitted the intentionally irrigated acreage and reservoir storage accruals compliance report to the North Platte Decree Committee (NPDC).

Baseline No. 2

Wyoming State Engineer's Office (SEO) collected all the pertinent water use information to compare 2007 water uses to the benchmarks under the existing water related Baseline No. 2 in Wyoming's Depletions Plan. Attachment 1 and 2 contain the detailed Water Year 2007 (WY 2007) water use data and the reporting of new depletions. As of the WY 2007, Wyoming's total water uses are less than water related Baseline No. 2. The under-runs, translated to the state line, are 59,212 acre-feet for the irrigation season and 2,714 acre-feet for the non-irrigation season.

Baseline No. 3

The development of post-1997 storage in the South Platte River basin is 33.9 acre-feet.

Federal Nexus Activities

In 2007, the State Coordinator of Wyoming's Depletions Plan individually reviewed 13 federal nexus water related activities. The lead federal agencies had previously conducted formal interim consultations with the U.S. Fish and Wildlife Service on five of the 13 water related activities. All these nexus activities were covered by the Depletions Plan and the PRRIP under existing water related baselines.

Attachment 1
Wyoming's Water Year 2007 Depletions Report

I. Existing Water Related Activities-Baseline No. 1

A. 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 29, 2008. The intentionally irrigated acreage was 193,266 acres for the sub-basin above Guernsey Reservoir.

B. Kendrick Project

The Kendrick Project did not exceed the acreage limitation of 24,248.23 acres.

C. Mitigation

No mitigation is required.

II. Existing Water Related Activities-Baseline No. 2

A. Annual Water Use versus Benchmarks

Irrigation water use in the Benchmark No. 2 sub-basins appears in Attachment II-Table II. 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 Water Year 2007.

Attachment II compares the WY 2007 water use with the Benchmarks. The irrigation, municipal, industrial, rural domestic water uses are included in each respective row in Table III.

The source of the rural domestic population data is the Wyoming Department of Administration and Information. The rural domestic use is based upon 2006 populations, which are the most current data available.

While there have been permanently retired water uses since 1996, none are contained within Table III. In the future Wyoming plans to investigate rural subdivision development, Wyoming Board of Control (WBOC) water right abandonments, and other abandonment activities.

B. Mitigation

After the overruns and underruns are translated to the State line, the net effect is an underrun of 59,212 acre-feet for the irrigation season and 2,714 acre-feet for the non-irrigation season, so no mitigation is required.

III. South Platte River Basin

The post 1997 storage developed in the South Platte River basin is 33.9 acre-feet. All of these facilities were small ponds for stock, wildlife, fish propagation, or environmental purposes. The cumulative effect of these facilities could not affect flows at the State Line during a large runoff event.

Attachment 1

Wyoming's Water Year 2007 Depletions Report

IV. Proposed Changes to Benchmarks

No changes in benchmarks are being requested at this time. WBOC water right transfer activities and other types of land use changes will be assessed and monitored in the future to evaluate the need for benchmark changes.

V. New Water Related Activities

A. In Attachment II-Table III Wyoming reports to the Governance Committee the new water related activities commencing between July 1, 1997 and September 30, 2007 that are covered by existing water related Baseline No. 2 in Wyoming's Depletions Plan.

The new water related activities initiated since 1997 consist of small ponds, alluvial impoundments, and miscellaneous wells. The estimated net depletions of the miscellaneous wells during the irrigation and non-irrigation seasons are 110.5 acre-feet and 55.3 acre-feet; respectively. The small ponds are non-irrigation facilities that have capacities less than 20 acre-feet. The estimated net depletions of the small ponds and alluvial impoundments during the irrigation and non-irrigation seasons are 101.2 acre-feet and 78.3 acre-feet; respectively. The annual evaporation of the four alluvium impoundments located in the Pathfinder to Guernsey sub-basin area has been offset by the retirement of irrigated acres.

Our baseline monitoring indicates that there have been increased depletions resulting from a new golf course in Rawlins, commercial and residential growth in Evansville, an expansion of the Sinclair refinery in Sinclair, and a relatively new ethanol plant in Torrington. While these activities can be covered under the existing water related Baseline No. 2 this year, we will continue to monitor these increases and may be requiring mitigation in the future.

B. The State of Wyoming has reviewed 13 water related activities associated with a federal nexus. Eight activities initiated after January 1, 2008 are listed in Table IV. The five remaining activities were interim consultations in which the project proponents initially consulted with the U.S. Fish and Wildlife Service between 1997 and January 1, 2008. All these activities were covered by the Wyoming's Depletions Plan and the PRRIP under existing water related baselines.

VI. Non-hydrologically Connected Groundwater Wells

A map illustrating the general locations of ten non-hydrologically connected groundwater wells with permitted capacities equal to or greater than 500 gallons per minute approved between July 1, 1997 and September 30, 2007 is attached. The SEO permit data for each well is provided in Table V. Since Permit No. U.W. 163769 lies outside the non-hydrologically connected areas; Wyoming sought exclusion of hydrologic connection for this individual irrigation well by the Ground Wells Subcommittee of the NPDC. Wyoming received concurrence of non-hydrological connection at the October 19, 2004 NPDC meeting.

Attachment 2
Wyoming's Water Year 2007 Depletions Report

Table I. Existing Water Related Baseline No. 1

Decree Category	Benchmark	2007	Difference
	Acreage	Acreage	Acreage
Irrigated Acreage-Ab. Gu.	226,000	193,266	32,734
Irrigated Acreage-Kendrick	24,248	*	

*Less than 24,248 acres. During a personal conversation with Mr. John Lawson on March 10, 2008, Mr. Lawson said there was no evidence that the Kendrick Project exceeded this acreage cap in WY 2007.

Table II. Existing Water Related Baseline No. 2 - Irrigation Water Use

Sub-basin	Acreage	Acreage	Overruns	Unit	Overruns
	Benchmark	2007	(Underruns)	C.U.	(Underruns)
	(acres)	(acres)	(acres)	(af/acre)	(acre-feet)
Guernsey-State Line	108,964	85,051	-23,913	1.32	-31,566
Horse Creek	41,179	*		1.16	
Upper Laramie	92,440	84,115	-8,325	0.79	-6,577
Lower Laramie	86,271	52,596	-33,675	1.31	-44,114
Total-Irrigation	328,854	221,762	-65,913		-82,257

*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 2007.

Attachment 2
Wyoming's Water Year 2007 Depletions Report

Table III. Water Year 2007 Overruns (Underruns)

Table G.1-Irrigation Season-Overruns (Underruns) AF									
Sub-basin								Tracking	Effects
	Irrigation	Municipal	Industrial	Rural	Retired	New Water	Total	Factors	State Line
	Use	Use	Use	Domestic	Uses	Activities			(AF)
Above Pathfinder		-160	295	-121	0	106	119	0.9	107.2
Pathfinder to Guernsey		-1,291	-2,084	52	0	1	-3,323	0.975	-3,240.1
Guernsey to State Line	-31,566	-672	-17	19	0	34	-32,202	1	-32,201.9
Horse Creek		28	0	-17	0	37	48	0	0.0
Upper Laramie	-6,577	-805	0	63	0	10	-7,310	0.25	-1,827.4
Lower Laramie	-44,114	-3	0	-7	0	24	-44,100	0.5	-22,050.0
Totals	-82,257	-2,904	-1,807	-12	0	212	-86,768		-59,212.1

Table G.2-Non-Irrigation Season-Overruns (Underruns) AF									
Sub-basin								Tracking	Effects
	Irrigation	Municipal	Industrial	Rural	Retired	New Water	Total	Factors	State Line
	Use	Use	Use	Domestic	Uses	Activities		Table II	(AF)
Above Pathfinder		178	428	-61	0	24	569	0.93	529.1
Pathfinder to Guernsey		-30	-2,514	26	0	48	-2,470	1	-2,470.2
Guernsey to State Line		-274	-372	15	0	24	-608	1	-607.9
Horse Creek		-9	0	-9	0	25	7	1	6.9
Upper Laramie		-141	0	36	0	3	-102	0.5	-51.0
Lower Laramie		-128	0	-4	0	11	-121	1	-121.1
Totals		-404	-2,458	4	0	134	-2,725		-2,714.2

Attachment 2
Wyoming's Water Year 2007 Depletions Report

Table IV. Federal Nexus Activities

Project	Project Proponent	Federal Agency
1. Douglas Water Treatment Plant Rehabilitation/Replacement	City of Douglas	EPA, Region 8 (WDEQ State Revolving Funds Program)
2. Medicine Bow-Routt National Forest Ditch Bill	Wyoming Easement Applicants	USFS, Medicine Bow-Routt National Forest
3. Pathfinder Pipeline	Sinclair Pipeline Company	Bureau of Land Management, Rawlins Field Office
4. Overland Pass Pipeline	Overland Pass Pipeline Company	Bureau of Land Management, Rawlins Field Office
5. Western Conservation Partners - LaPrele Wildlife Ponds	Western Conservation Partners	USDA, Natural Resources Conservation Service
6. Town of Saratoga Wellfield and Transmission Line	Town of Saratoga	Bureau of Land Management, Rawlins Field Office EPA, Region 8 (WDEQ State Revolving Funds Program)
7. McKenzie 1-7H Oil Well	Continental Production Company, LLC	Bureau of Land Management, Casper Field Office
8. FY 2008 State Transportation Improvement Program	Wyoming Department of Transportation	U.S Department of Transportation Federal Highway Administration, Wyoming Division

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Wyoming's Water Year 2007 Depletions Report

Table V. SEO Permit Data for Non-hydrologically Connected Groundwater Wells

Permit	Priority	County	Uses	Actual Yield (gpm)	Static Water Level (Feet)	Well Depth (Feet)	Facility Name
P136150W	6/13/2001	Natrona	IND	2400	363	867	WELLFIELD 2 SW/SW/25
P136155W	6/13/2001	Natrona	IND	1300	335	862	WELLFIELD 2 SE/SE/26
P135770W	2/26/2001	Natrona	IND	1200	298	470	WELLFIELD 1 SW/NE/36
P135768W	2/26/2001	Natrona	IND	1200	258	458	WELLFIELD 1 SE/NE/36
P135771W	2/26/2001	Natrona	IND	1450	316	534	WELLFIELD 1 SE/NW/36
P113372W	12/9/1998	Natrona	IND	720	393.15	1015	WELLFIELD 4 SW/NE/34
P113373W	12/9/1998	Natrona	IND	856	262.45	855	WELLFIELD 4 SE/NE/34
P113370W	12/9/1998	Natrona	IND	840	335.85	965	WELLFIELD 4 NE/SW/34
P113369W	12/9/1998	Natrona	IND	750	223.24	830	WELLFIELD 4 NW/SW/34
P163769W	12/31/2001	Platte	IRR	--	--	400	Lloyd #2

