

MEMORANDUM

Date: March 16, 2011
To: Transfer 77030
From: bjordan
Re: Transfer Evaluation

This transfer proposes to change the place of use, change the point of diversion and change the nature of use for a portion of water right 29-2487. Idaho Department of Fish and Game is seeking to provide mitigation to cover the evaporative losses of a 4.0 acre community fishing pond located in Pocatello, ID. IDFG filed an application for permit (29-13998) to establish a 47.0 acre-foot recreation storage water right, where the initial fill and subsequent refills for the recreation pond will be provided through renting water from the water supply bank.

Historically, water right 29-2487 was used for domestic purposes at Idaho Department of Transportation's rest area (Point of Entry Rest Area; POE). This water right provided water for two restroom facilities and the irrigation of approximately 2.5 acres of lawn. The rest area was closed to the public in 2007. Thus, the applicant is seeking to transfer the irrigation portion of the domestic water right to cover a portion of the evaporative losses from the 4.0 acre recreation pond.

Historically, approximately 2.5 acres of lawn were irrigated at the rest area. According to the Kimberly ET Idaho website at the Pocatello WB AP NWS station, the crop irrigation requirement (CIR) for Grass-Turf (lawns) that are irrigated is 803 mm/acre (2.63 feet/acre). The CIR requirement for 2.5 acres of irrigated grass is 6.6 acre feet. The applicant will seek to move the 6.6 acre-feet to the recreation pond. Because sprinkler systems are not 100% efficient, additional flow rate and volume is needed to pressurize the sprinkler system and provide enough water for the crops irrigation requirement. Assuming that the rest areas sprinkler irrigation system is 75% efficient, 8.8 acre-feet of water is needed to irrigate 2.5 acres of lawn. The applicant will be permitted to transfer 6.6 acre-feet for the pond, but water right 29-2487 will be reduced by 8.8 acre feet. The remaining volume for right 29-2487 will be 13.4 acre-feet.

According to the same Kimberly ET Idaho website and NWS station, open water shallow systems (ponds, streams) consume approximately 642.22 mm/acre (2.1 feet/acre) during March through October time period. The proposed recreation pond surface area is 4.0 acres and will evaporate at a rate of 8.4 acre-feet per year (March- October).

The 6.6 acre-feet involved in this transfer will only cover a portion of the evaporative losses caused by the pond. The pond will be constructed on IDFG property located in Pocatello on a flood plain adjacent to the Portneuf river, where the soils are wet for prolong periods of time and natural riparian vegetation is thriving. The removal of the thriving natural riparian vegetation will help offset the depletion of water caused by the 4.0 acre pond. The removal of the thriving natural riparian vegetation will cover the remaining 1.8 acre-feet needed to fully mitigate for the pond. No additional mitigation will be required for the 4.0 acre recreation pond.

Authority to File:

The Idaho Transportation Department (ITD) is the current owner of water right 29-2487 per IDWR record. ITD provided a conveyance document giving IDFG a portion (6.6 acre-feet) of water right 29-2487. An ownership change will occur as a result of this transfer. David Teuscher, who is the Regional Fish Manager for IDFG signed the application.

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Water Right Validity:

Decreed in 2004. Rest area was closed in 2007. The rest area was open and operating in 2006. Forfeiture is not an issue.

Injury to Other Water Rights:

Neither inside the ESPA nor within a WD. No ESPA analysis required. No injury issues identified. Transfer was advertised and there are no protests.

Enlargement of Use:

No issues identified

Local Public Interest:

No issues identified.

Beneficial Use / Conservation of Water Resources:

No issue identified.

Review of the application finds there is not clear inconsistency with criteria set forth in Section 42-222 Idaho Code preventing processing of this application.

ET_{Idaho} 2009: Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

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Pocatello WB AP (NWS --107211)

Statistics based on thirty

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Open water - shallow systems (ponds, streams)															
Precipitation Deficit (Click here for a graph)															
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b	Annual
Mean	mm/day												642.22	mm	
Monthly ^c	0.47	0.11	0.64	1.92	2.40	3.76	4.37	3.76	2.48	1.56	0.13	0.55	600	0	600
15-Day Moving Average ^d	0.49	0.29	0.67	1.94	2.37	3.83	4.40	3.66	2.38	1.61	0.08	0.46			
7-Day Moving Average ^e	0.48	0.20	0.67	1.93	2.36	3.79	4.37	3.73	2.42	1.60	0.11	0.52			
3-Day Moving Average ^f	0.48	0.13	0.64	1.93	2.38	3.77	4.37	3.76	2.45	1.56	0.10	0.54			
Standard Deviation	mm/day												mm		
Monthly	0.86	0.68	1.17	0.80	1.62	0.94	1.09	0.88	0.92	0.97	0.70	1.04	129	0	129
15-Day Moving Average	0.92	0.89	1.02	1.08	1.66	1.23	0.94	0.91	1.26	1.01	0.93	0.83			
7-Day Moving Average	1.15	1.18	1.31	1.46	2.19	1.81	1.27	1.23	1.60	1.44	1.27	1.16			
3-Day Moving Average	1.43	1.55	1.98	2.05	2.89	2.49	1.73	1.68	2.15	1.98	1.80	1.64			
20% Exceedance	mm/day												mm		
Monthly	0.06	0.50	1.32	2.67	3.36	4.47	4.95	4.32	3.31	1.99	0.51	0.04	707	0	707
15-Day Moving Average	0.39	0.72	2.01	3.57	4.55	5.26	5.32	4.77	3.68	2.94	1.11	0.39			
7-Day Moving Average	0.72	1.41	2.70	4.31	5.26	5.75	5.75	5.22	4.25	3.60	1.67	0.86			
3-Day Moving															

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Statistics based on thirty

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Grass - Turf (lawns) - Irrigated														
Precipitation Deficit (Click here for a graph)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b
Mean	mm/day												mm	
Monthly ^c	0.11	0.05	0.09	1.22	3.49	5.57	6.30	5.48	3.33	0.79	0.42	0.22	803	-21
15-Day Moving Average ^d	0.10	0.01	0.08	1.13	3.49	5.61	6.34	5.38	3.29	0.74	0.42	0.19		
7-Day Moving Average ^e	0.11	0.04	0.09	1.18	3.47	5.58	6.31	5.45	3.30	0.78	0.44	0.20		
3-Day Moving Average ^f	0.11	0.05	0.08	1.22	3.47	5.58	6.31	5.49	3.31	0.78	0.42	0.21		
Standard Deviation	mm/day												mm	
Monthly	0.27	0.08	0.45	0.99	1.84	1.01	1.18	0.92	1.31	1.52	0.41	0.37	124	19
15-Day Moving Average	0.25	0.13	0.42	1.11	1.76	1.31	1.01	0.96	1.66	1.32	0.56	0.32		
7-Day Moving Average	0.37	0.26	0.67	1.41	2.34	1.90	1.32	1.27	2.00	1.74	0.92	0.46		
3-Day Moving Average	0.52	0.40	1.05	1.85	3.09	2.70	1.93	1.80	2.54	2.18	1.35	0.67		
20% Exceedance	mm/day												mm	
Monthly	0.01	0.11	0.20	1.82	4.47	6.30	6.90	6.03	4.56	1.63	0.10	0.02	871	-7
15-Day Moving Average	0.16	0.30	0.58	2.48	6.00	7.34	7.38	6.69	5.28	3.39	0.28	0.12		
7-Day Moving Average	0.28	0.59	0.88	3.90	7.10	7.99	7.94	7.20	6.07	4.69	0.58	0.32		
3-Day Moving														

PRECIPITATION DEFICIT CALCULATION FOR PONDS

														mm/foot	
														0.00328084	
MM/DAY															
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL MM	TOTAL FEET	Pond Size AF needed
MONTHLY	0	0	0.64	1.92	2.4	3.76	4.37	3.76	2.48	1.65	0	0			
	0	0	19.84	57.6	74.4	112.8	135.5	117	74.4	51.2	0	0	642.22	2.1	4 8.428084
Surface Area in ACRES	4	4	4	4	4	4	4	4	4	4	4	4		Total evaporate AF	
MM/Day	0	0	79.36	230.4	297.6	451.2	541.9	466	298	205	0	0	2568.88	8.428084002	
													acres needed Evap	8.204594678	

acres needed Evap	3.2
Total acres to dry up	3.2
Total AF for Pond	0

DATA ENTRY IN YELLOW

DAYS	29
	30
	31
	28
Crop Type = Turf Grass	
CIR AF/ACRE	2.63
Pond Size ACRES	0
AVERAGE depth of POND in FEET	0
AF NEEDED TO FILL POND	0
acres to dry up to fill pond	0