

5/26/09

To: Utah Division of Water Rights  
1594 W. North Temple  
Salt Lake City, Ut, 84114

From: Dasch Houdeshel  
1064 Norris Pl  
Salt Lake City, Ut, 84102  
e-mail: daschh@gmail.com

Subject: Change of use for Water Right: 89-74, Application/claim no.: A35818

Dear UDWR,

My name is Dasch Houdeshel, and I wish to add comments to the proposed change of use and/or change of point of diversion to Water Right: 89-74, Application/claim no.: A35818. I am an ecologist who has worked at the USGS Canyonlands Field Station, I am a river runner who has made part of my livelihood as a river guide in Canyonlands National Park and plan to continue to enjoy the ecosystem of both the Colorado and Green Rivers in Canyonlands National Park, and I am currently working towards a PhD in Water Resource Engineering at the University of Utah.

Although the source of the water for both the original water use and the proposed water source is the Colorado River, the points of diversion are significantly different hydraulically, and therefore have ecological and social consequences. My intentions of this letter are to confirm the Division's awareness of the issues I am concerned about.

I have two primary concerns regarding this transfer of rights: 1) I am concerned for the violation of implied in-stream water rights in the Green River by Canyonlands National Park for their roll to protect the wild desert canyons ecosystem for the sake of the environment (including endangered species) and for recreation; and 2) I am concerned about beneficial use of the water lost to evaporation as reservoirs will be necessary to insure supply to the energy production facility and to allow sediments to settle out of the very silty river water.

Based upon data obtained from the USGS Real-Time Water Data for Utah (<http://waterdata.usgs.gov/ut/nwis/rt>), I am concerned that removing the proposed 70,000 acre-feet of water per year from the Green River above Canyonlands National Park may harm the ecology of the system beyond an acceptable level, or by a level suggested by the party filing for change of use. This concern is rooted in the historical pattern of flow of the Green River. The historical record of flow exposes a pattern of drought as normal with infrequent years of flood-level flows. This pattern projects an average flow condition that is in no way representative of "normal", and grossly over-estimates the annual return of flows. For example, the average annual flow since 1990 at the Green River gauging station (USGS 09315000 GREEN RIVER AT GREEN RIVER, UT) is approximately 3.4 million acre-feet, however, only three years since 1990 have recorded annual flows between 3 and 4 million acre feet. Over half of these 19 years recorded flows below 3 million acre-feet. 70,000 acre-feet represents 2.3 percent of 3 million acre-feet. My concern is that reducing annual deliver by this amount could have an unacceptably adverse affect on the ecosystem of Canyonlands National Park.

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The affects of these reduced flows could possibly include further promulgation of *Tamarix spp.*, habitat degradation for native fish such as the Humpback chub (*Gila cypha*) or the Razorback sucker (*Xyrauchen texanus*), and indirectly affect local and migratory avian populations. Since 1990, a 70,000 acre-foot reduction in flow taken out of the river at constant a constant rate of 94 cubic feet per second would have represented greater than 7% flow reduction into the Canyonlands National Park ecosystem on over 500 days since 1990. This reduction in the seasonal low flows could possibly bring great harm to the ecosystem.

In addition to degradation of the ecosystem, a decrease in flows may physically reduce recreational opportunities down stream of the proposed point of diversion, including the Green River in Canyonlands National Park. If flows are diverted year round, a reduction of flow by as little as 5 percent in September could possibly reduce access by boaters. Also, if flows are diverted only during the spring runoff, significantly large amounts of water would have to be diverted at one time. This could potentially change the hydrology, sedimentation, and beach formation critical to recreational visitors and ecosystem functions.

The beneficial use of all of the 70,000 acre-feet of water addressed in the application is also of critical concern. The Green river is very silty at the proposed point of diversion, and this water must be treated before it is useable. Large reservoirs will likely have to be constructed to facilitate settling and to insure consistent delivery and an emergency supply of water to the facility. The proposed area experiences some of the nation's highest evaporation rates due to the high elevation and dry climate. According to the National Ocean and Atmospheric Administration (NOAA), the proposed location of diversion experiences an evaporation rate of 1.6 inches per month in the summer months. ([http://www.cpc.ncep.noaa.gov/soilmst/eclim\\_frame.html](http://www.cpc.ncep.noaa.gov/soilmst/eclim_frame.html)) it is likely that such a facility will require a reservoir on the order of 100's of acres. For every one hundred acres of reservoir, the facility will loose approximately 50 acre-feet per summer. I do not have specific information about seepage losses, however, this geological region is susceptible to high losses to exfiltration as well.

I look forward to a future where our energy and water demands are addressed in the most sustainable manner. I believe that the State Engineer's office is actively working toward this goal, and that the Division of Water Rights strives for a future of sustainable water use as well. I hope you consider the above-mentioned issues in processing the Change of Use application associated with Water Right: 89-74, Application/claim no.: A35818. Please feel free to contact me with any questions.

Sincerely,

Dasch Houdeshel  
Graduate Student,  
University of Utah

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Utah Division of Water Rights

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(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 05/26/2009

WATER RIGHT: 89-74 APPLICATION/CLAIM NO.: A35818 CERT. NO.:
CHANGES: a35402 Unapproved
a8569 Withdrawn
a9020 Unapproved

OWNERSHIP

NAME: Kane County Water Conservancy District
ADDR: 190 West Center Street, Suite 200
P. O. Box 122
Kanab UT 84741

INTEREST: 100% REMARKS:

DATES, ETC.

LAND OWNED BY APPLICANT? COUNTY TAX ID#:
FILED: 01/15/1964 PRIORITY: 01/15/1964 PUB BEGAN: 04/16/1964 PUB ENDED:
ProtestEnd: [ ] PROTESTED: [HearHeld] HEARNG HLD: [ ] NEWSPAPER:
EXTENSION: 09/25/2008 ELEC/PROOF: [ ] ELEC/PROOF: [ ] ActionDate:09/03/1965 PROOF DUE: 09/30/2008
RUSH LETTR: [ ] RENOVATE: [ ] RECON REQ: [ ] TYPE: [ ]
PD BOOK: [ 89- ] MAP: [ ] PUB DATE: [ ]

Type of Right: Application to Appropriate Source of Info: Application to Appropriate Status: Approved

LOCATION OF WATER RIGHT\*\*\*(Points of Diversion: Click on Location to access PLAT Program.)\*\*\*\*\*MAP VIEWER\*\*\*\*\*

FLOW: 13670.0 acre-feet SOURCE: Lake Powell
COUNTY: Kane COMMON DESCRIPTION: Warm Crk / Lake Powell

POINT OF DIVERSION -- SURFACE:

(1) N 0 ft E 300 ft from SW cor, Sec 03, T 43S, R 4E, SLBM
Diverting Works: structures and pipelines

Source: Colorado River, Lake Powell

Stream Alt Required?: No

USES OF WATER RIGHT\*\*\*\*\* ELU -- Equivalent Livestock Unit (cow, horse, etc.) \*\*\*\*\* EDU -- Equivalent Domestic Unit or 1 Family

SUPPLEMENTAL GROUP NO. 613428.

POWER: Kaiparowits Steam Generation Power Plant, rated at 5000 MW. PERIOD OF USE: 01/01 TO 12/31
Acres Feet Contributed by this Right for this Use: 13670.0

Table with columns: PLACE OF USE, NORTH WEST QUARTER, NORTH EAST QUARTER, SOUTH WEST QUARTER, SOUTH. Rows for Sec 05 T 43S R 4E SLBM and Sec 06 T 43S R 4E SLBM.

SEGREGATION HISTORY

This Right was Segregated from , with Appl#: , Approval Date: / / under which Proof is to be submitted.
This Right as originally filed:

Table with columns: FLOW IN CFS, QUANTITY IN ACRE-FEET, IRRIGATED ACREAGE, STOCK (ELUS), DOMESTIC (FAMILIES), MUNICIPAL, MINING, POWER, OTHER.

Power is Steam Generated - 1,000,000 KW to 5,000,000 KW.

The following Water Rights have been Segregated from 89-74:

( 1 ) WRNUM: 89-74 72000.0

APPL#:
NAME: ABANDONMENT
FILED: / / 0 STATUS:
APPR:

As per applicant's statement on Change Application a9020 and 89-1285(al1462)

( 2 ) WRNUM: 89-1285 16330.0

APPL#: A35818a
NAME: AMCA Coal Leasing Inc.
FILED: 09/24/1980 STATUS: APP
APPR: 05/24/1993

See change application al1462 (Later withdrawn by applicant)

Table with columns: CFS, ACRE-FEET, IRRIGATED ACREAGE, STOCK (ELUS), DOMESTIC (FAMILIES), MUNICIPAL, MINING, POWER, OTHER.

89-74 currently has: -- 13670.0
All POWER-WR but NOT has been SEGREGATED OFF.

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PROTESTANTS\*\*\*\*\*

NAME: HEAL Utah  
ADDR: c/o Christopher Thomas  
68 South Main Street, Ste. 400  
Salt Lake City, UT 84101

NAME: Redrock Forests  
ADDR: c/o Harold Shepherd - Issues Director  
PO Box 298  
Moab, UT 84532

NAME: HEAL Utah  
ADDR: c/o Bill Adams  
PO Box 293  
Green River, UT 84525

NAME:  
ADDR:

APPLICATIONS FOR EXTENSIONS OF TIME WITHIN WHICH TO SUBMIT PROOF\*\*\*\*\*

FILED: 11/24/1998 | PUB BEGAN: 12/16/1998 | PUB ENDED: | NEWSPAPER: Southern Utah News  
ProtestEnd:01/12/1999 | PROTESTED: [Yes ] | HEARNG HLD: | SE ACTION: [Approved] | ActionDate:05/20/1999 | PROOF DUE: 11/30/2003

FILED: 11/25/2003 | PUB BEGAN: 12/17/2003 | PUB ENDED: 12/24/2003 | NEWSPAPER: Southern Utah News  
ProtestEnd:01/13/2004 | PROTESTED: [Yes ] | HEARNG HLD: | SE ACTION: [Approved] | ActionDate:04/22/2004 | PROOF DUE: 09/30/2008

FILED: 09/25/2008 | PUB BEGAN: 10/08/2008 | PUB ENDED: 10/15/2008 | NEWSPAPER: Southern Utah News  
ProtestEnd:11/04/2008 | PROTESTED: [HearRqst] | HEARNG HLD: | SE ACTION: [ ] | ActionDate: | PROOF DUE:

\*\*\*\*\*E N D O F D A T A\*\*\*\*\*

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