Weaver, Mathew

From: Weaver, Mathew
Sent: Monday, March 26, 2012 1:43 PM
To: 'Christian Petrich'
Cc: Van Bussum, Monica; Lester, Steve; Tesch, Craig
Subject: FW: Nevid Monitoring Plan
Attachments: Rev. Ground Water Level Monitoring Plan-signed.pdf

Christian,

Consistent with condition of approval number six on WR permit 61-12090, please let this email correspondence act as notification from the Department, that this monitoring plan is approved for implementation. As it regards to a future water supply bank (WSB) lease, the monitoring plan is generally acceptable. However, although we currently have no concerns regarding the monitoring plan, final acceptance as it relates to a WSB lease is reserved until that time when an active application is submitted to the Department for review and consideration.

I will update the permit file with the monitoring plan and respective communications. If anyone has any questions or concerns please give me a call.

Mat Weaver, P.E.
Idaho Department of Water Resources
322 E. Front Street - Boise, ID 83720
(208) 287-4914 (phone)
(208) 287-6700 (fax)

From: Christian Petrich [mailto:CPetrich@spfwater.com]
Sent: Friday, March 23, 2012 3:12 PM
To: Weaver, Mathew
Subject: Nevid Monitoring Plan

Matt,

Please find attached a signed Nevid Monitoring Plan. It should be consistent with the previous versions that you have seen. Please call me if you have any questions.

Regards,
Christian

Christian R. Petrich, Ph.D., P.E., P.G.
SPF Water Engineering, LLC
300 East Mallard Drive, Suite 350
Boise, ID 83706
tel: 208-383-4140
fax: 208-383-4156
email: cpetrich@spfwater.com
web: spfwater.com

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tel: 208-383-4140
fax: 208-383-4156
email: cpetrich@spfwater.com
web: spfwater.com

Revised Ground Water Level Monitoring Plan
Permit 61-12090

Prepared for

Nevid LLC
c/o John Erickson
Woods Erickson Whitaker & Maurice LLP
1349 Galleria Drive, Suite 200
Henderson, Nevada 89014

Prepared by

SPF Water Engineering, LLC
300 East Mallard, Suite 350
Boise, Idaho 83706
(208) 383-4140

Submitted by

John Erickson
Nevid LLC

February 15, 2012

SPF WATER ENGINEERING

1. INTRODUCTION

Permit 61-12090, held by Nevid LLC and approved on November 24, 2009, authorizes a maximum diversion of (1) 1.82 cubic feet per second (cfs) and 345 acre-feet per year (AFA) for municipal purposes and (2) 2.2 cfs for fire protection purposes. The permit requires that "the right holder shall provide the Department with a plan for monitoring ground water levels in the vicinity of the place of use for this water right" (Condition No. 6).

This document presents a monitoring plan as requested under Condition No. 6 in Permit 61-12090. This monitoring plan also describes proposed monitoring should the applicant conduct temporary irrigation using water rented from the Idaho Water Supply Bank.

2. MONITORING PLAN

The proposed monitoring plan consists of the following:

1. Install pressure transducers and dataloggers in two on-site wells:
    a. A dedicated water-level monitoring well (shallow observation well) has been drilled in the NWSE of Section 11, T1S R4E (Figure 1). This well was completed in October 2010 with a screened interval extending from 418 to 538 feet below ground surface
    b. A 1,120-foot deep production well (Elk Creek Village production well), located in the NWSE Section 11, T1S R4E, was completed in April 2011.
2. Record water level readings every six hours for the first year, with re-evaluation of measurement frequency thereafter.
3. Install a barometric pressure recorder in the shallow observation well. Record pressure readings every six hours for the first year, with reevaluation of measurement frequency thereafter.
4. Install a flowmeter on the production well (e.g., magmeter) to record discharge over the first year, with bi-monthly (every other month) readings for the first year of production, and quarterly thereafter. The flowmeter will meet IDWR's minimum acceptable standards for measurement and reporting of surface and groundwater diversions:
    a. Minimum manufacturers' design accuracy of ± 2% of reading;
    b. Repeatability of at least ±5% of reading;
    c. Meter must be calibrated with an independent, secondary measuring device when installed, and at least once every four years thereafter;
    d. Must read instantaneous flow or be capable of flow rate calculation;

e. Must record total volume;

f. Non-volatile memory (power outage does not zero volume reading);

g. Sufficient digits to ensure "roll-over" does not occur within two years;

h. Volume reading cannot be reset; and

i. Installed to manufacturers' specifications (meter manufacturers typically specify that a meter must be located in a section of straight pipe at least 10 pipe diameters downstream and 5 pipe diameters upstream of any valves, bends, contractions, or other interferences that will distort the flow pattern).

5. Bi-monthly (i.e., every other month) hand measurement of water levels for the first year, with quarterly measurements thereafter.

6. Water levels in the production and shallow observation wells were collected prior to the commencement of test pumping.

   a. A static water level of 370 feet below ground surface was recorded in the shallow observation well on November 2, 2010.

   b. The static water level in the production well is approximately 344 feet below ground surface.

7. Initiation of pumping using an uninterrupted, constant withdrawal rate over an extended period of time

   a. A 4-day constant-rate pumping test of the production well was conducted from May 3 through May 7, 2011.

8. Submission of an annual report to IDWR that includes:

   a. Analysis of water level trends in the production well, shallow observation well, and nearby wells (e.g., based on available data from 01S04E-10DAD1, 01S04E-03ADB1, and/or 01S04E-03ADD1);

   b. Reporting of discharge rates over time and analysis in relation to water levels;

   c. Electronic records of water level and discharge data;

   d. Evaluation of downward return flow from irrigation discharge water in relation to water levels; and

   e. Reporting of any temporary agricultural use, including crops grown and acres irrigated during the year.

9. Monitoring of groundwater levels will continue through the permit development period, or until the permittee requests and receives written notification from the Department to discontinue monitoring, whichever comes first.

This monitoring plan is also intended to suffice for temporary irrigation diversions using water rented from the Idaho Water Supply Bank. The place of use for rented

water will be within the place of use requested in Application 61-12095 (which is contiguous with the place of use authorized under Permit 61-12090).

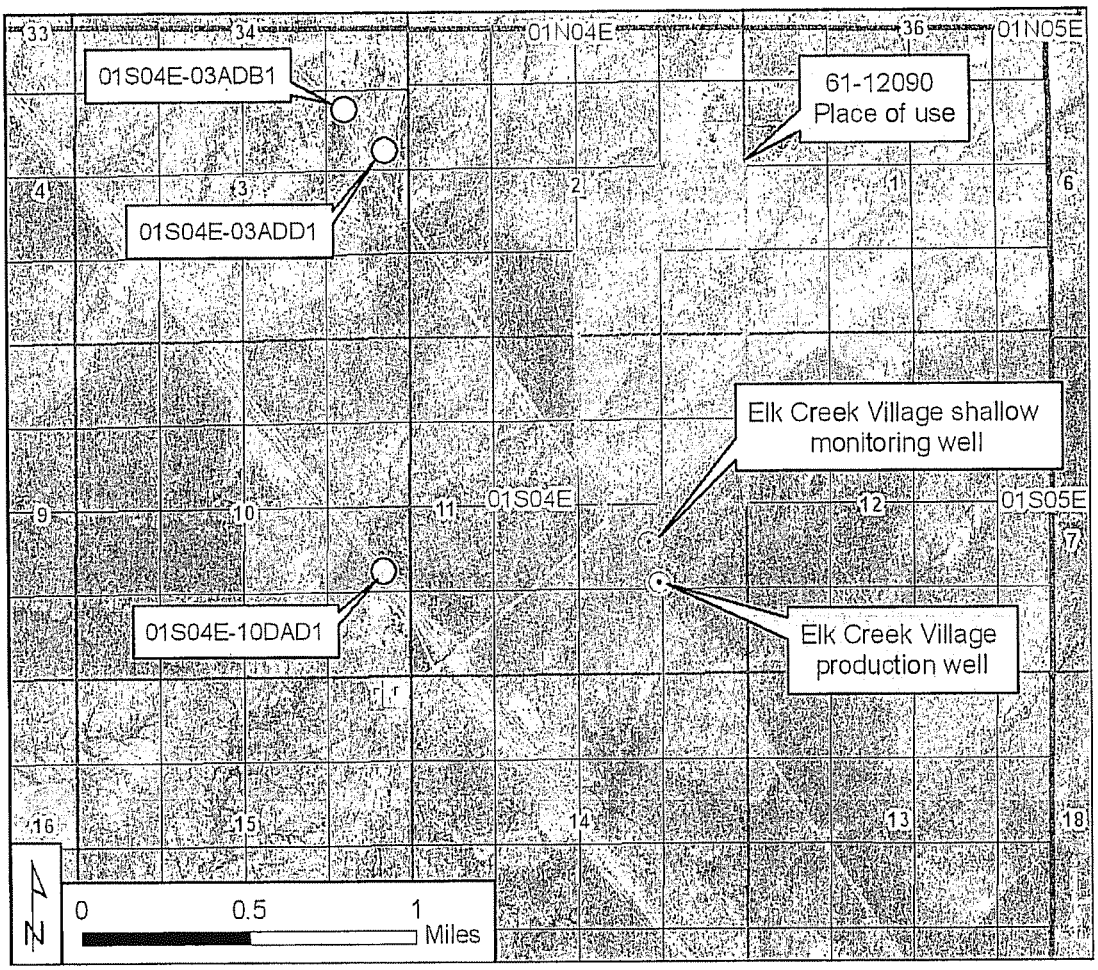

Figure 1: Elk Creek Village monitoring well locations.