

MEMORANDUM

TO: Water Right File – 63-10661
FROM: Aaron Skinner – Water Resource Agent
DATE: January 25, 2017
SUBJECT: Field Exam Review

This water right permit was approved on October 6, 1988 for irrigation use. The Proof of Beneficial Use form was submitted on November 26, 1990. The field exam was completed by department staff on July 15, 1992.

A memo in the backfile by Brenda Chapman dated April 8, 1993 suggested potential overlap of permit nos. 63-10661 and 63-10677. Field exams completed in 1991/92 for both permits suggested no overlap. After the field exam for permit no. 63-10677 was completed, an amendment was submitted that adjusted the POU. Office personnel noticed the overlap and wrote the memo as stated above. I performed an overlap analysis that identified ~~31~~³¹ acres of overlap. Both permits receive surface water from Nampa-Meridian Irrigation District and groundwater from each permit's well. It was decided to complete these permits simultaneously and set supplemental and combine use conditions for each permit. The season of use was adjusted to 3/01-11/15 according to current season of use boundaries. My review of the documentation supplied with the field exam is as follows:

Ownership: Permit no. 63-10661 is in the name of Carmen and Domingo Asumendi. Ada County taxlot data shows Carmen and the Asumendi Family Investments LLC as the current owners. IDSOS shows the Asumendi Family Investment LLC in good standing.

Source, POU, POD: The source is groundwater, which is pumped from a well into cement lined ditches that border the place of use area for flood irrigation. The Application for Permit acknowledged supplemental use as it was noted that water from the Nampa-Meridian Irrigation District was used. Permit no. 63-10677 acknowledges a rental agreement for the overlapping ~~31~~³¹ acres. The permit or field report does not identify supplemental use. Department policy requires user's to first use surface water as the primary source and groundwater as a secondary option. Therefore, it was determined in my review that supplemental and combine use limits are necessary.

The POD is located north of I-84 in the NENESW. The POD location is different than the POD for permit no. 63-10661.

The POU includes 104 acres in the NWNW, NENW, SENW, and NESW QQs in Section 16 as outlined in the aerial map included in the file. The total acres were adjusted from the permitted 125 acres. The 104 acres were calculated using ArcMap tools and includes all parcels outlined in the field exam. Legal descriptions match the permit, so no amendments are required.

Diversion rate and Volume: The permitted diversion rate is 2.50 cfs with no volume limits. The field exam report did not include any on site measurements noting there was not enough water in the ditches at the time of the exam. The examiner completed a theoretical calculation for a diversion rate of 2.56 cfs using a dynamic head of 113', 47 HP motor, and zero psi. The examiner stated 113' head was an estimation and I am unsure where the number came from. An

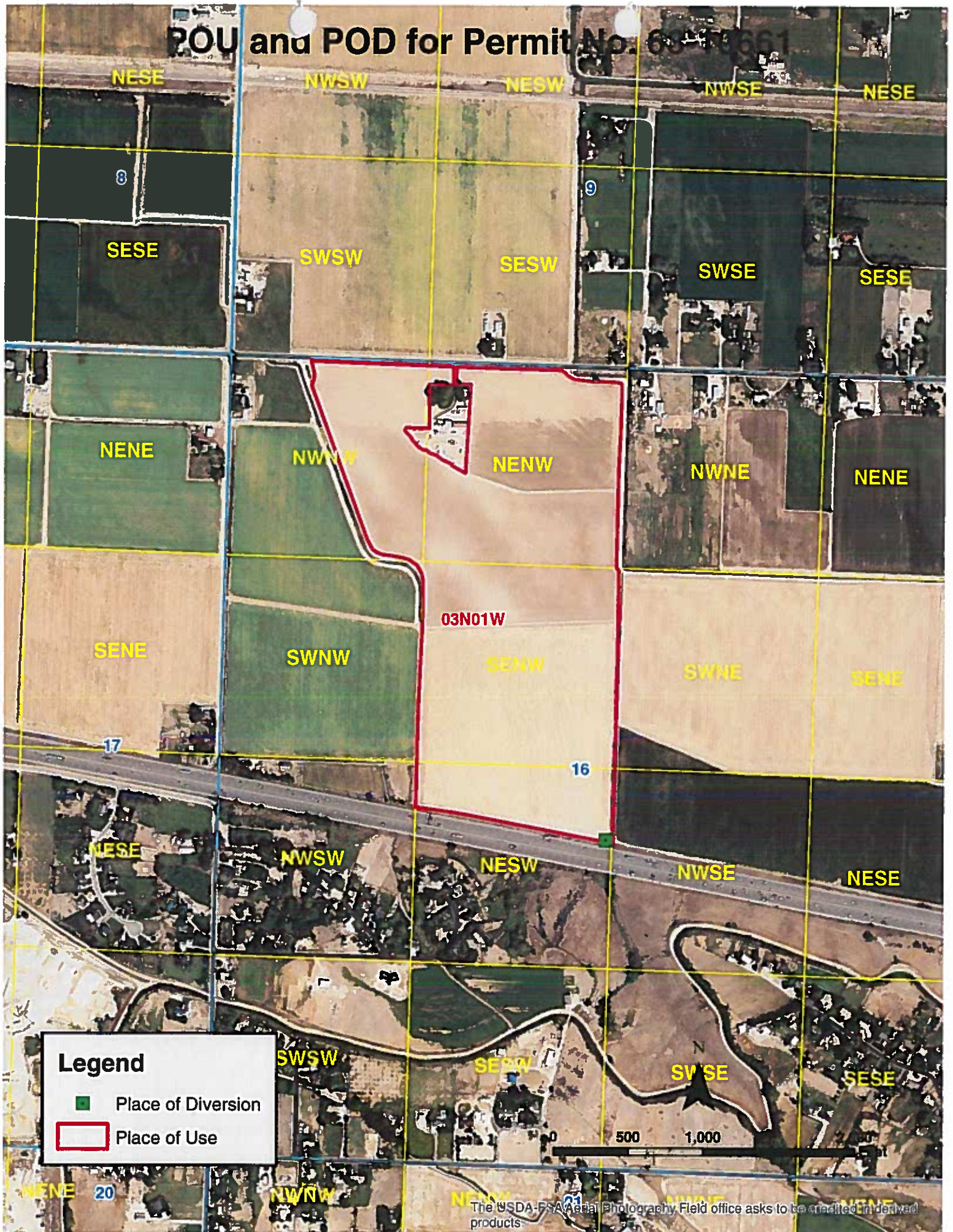
attached theoretical calculation was completed by me using the 47 HP motor, pumping levels of 80', 120', and 170', and a pressure of 0 psi. These figures were obtained from screen placement in the well as recorded in the well log and identified areas of confined water pockets. This theoretical calculation produced a diversion rate of 2.58 cfs. The permitted rate of 2.50 cfs was established using 0.02 cfs per acre. The diversion rate is recommended to be adjusted to 2.08 cfs (104 acres X 0.02 cfs). The field report calculated the volume limit to be 574.7 by multiplying the total acres by the head gate value (127.7 acres X 4.5 HG). Because the recalculated acreage is 104, the volume limit should be adjusted to 468 af (104 acres X 4.5 HG).

Overlap Review: POD analysis found 4 overlapping rights in the NESW QQ; WR nos. 63-16988, 63-18550, 63-19637, and 63-22384. WR no. 63-16988 is south of I-84 located in the SWNESW and does not overlap. WR no. 63-18550 is a centroid were taxlot data does not match the holder's name. So, overlap is undetermined. WR no. 63-19637 is located in the subdivision south of I-84 and does not overlap. WR no. 63-22384 is west of the POD located in the NWNESW and does not overlap. Therefore, no known POD overlap exists for this permit. The field exam noted no POD overlap.

POU analysis identified permit no. 63-10677 overlapping with this permit as noted above. 5 other potential overlapping rights along with 26 municipal rights and 26 irrigation district rights were noted during the analysis. The 5 rights with overlap potential are WR nos. 63-16988, 63-17160, 63-18550, 63-18768, and 63-19637. All of these rights are either domestic or stockwater use from groundwater. No overlap is pertinent. Although the field exam did not acknowledge overlap with permit no. 63-10677, ~~3~~³¹ acres do overlap. Therefore, supplemental and combine use conditions have been added and forwarded to licensing.

Summary: It is recommended to license permit no. 63-10661 for a diversion rate of 2.08 cfs and volume limit of 468 af. Conditions forwarded to licensing include X35, R61, 065, 105, WB7, and 01M. Removed conditions include 026, 046, and 01G. Condition 01G was assumed satisfied as a field exam was done and a measurement was "attempted." The season of use was changed from 3/15-11/15 to 3/01-11/15 per the season of use layer in ArcMap.

POU and POD for Permit No. 68-10661



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 63-10661
 Reviewer: Aaron Skinner
 Date of Review: 1/25/2017

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	47	47	47
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	80	120	170
DISCHARGE PRESSURE	0	0	0
RATE OF FLOW (cfs)	3.62	2.41	1.70 2.58

The above calculates the formula =
$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

A 47 hp pump was noted on the field exam. Lift was measured using the well log. Three screens were placed at depths 40' to 60', 80' to 100', and 160' to 200'. Because the whole well is used to supply water, depths 80', 120', and 170' were used for the pumping level. Discharge pressure of zero was used for the gravity fed system. Theoretical average flow rate is 2.58 cfs.

