

MEMORANDUM

TO: Water Right File 63-33952

FROM: Daniel Nelson – Analyst 3

DATE: February 6, 2019

SUBJECT: Licensing Review of Water Rights 63-33952

The field exam for this right was performed by Certified Field Examiner Scott King of SPF Water Engineering. Mr. King recommended a diversion rate of 0.95 cfs and 490 af for the supplemental irrigation of 156 acres. There are a few issues that need to be addressed.

History and Overlap:

This farm has historically been irrigated using Boise Kuna Irrigation District water rights. In 1994, license 63-11633 was issued to divert 0.65 cfs and 292.5 af for supplemental irrigation for 65 acres. The entire farm is actually 221 acres, so this permit was filed to cover the remaining 156 acres.

Place of Use:

I agree with the total acres Mr. King recommended. However, due the lack of mapping abilities when the license for 63-11633 was issued it is impossible to determine the exact acres being covered by water right 63-11633. I requested Mr. King provide a map showing where the 2 acres in the NESE and the 6 acres in the NWSE are located. Mr. King supplied a map showing the entire place of use as being in a permissible place of use, so I also gave Mr. King the option to request an amendment to create a permissible place of use. Mr. King stated that his client didn't want to file an amendment of permit, so he provided me with a shape file. I had to move it around a bit to make the acres designated to match the Department's imagery. Mr. King confirmed that these acres were accurate.

Diversion Rate:

Mr. King measured the well at a diversion rate of 0.95 cfs. Water right 63-11633 authorized a diversion rate of 0.65 cfs for the 65 acres. Water right 63-11633 and this permit use the same well, so there will need to be a condition that limits the use of water when the two rights are combined to 0.95 cfs.

There is a bit of concern that this diversion rate cannot supply the full rate per acre needed to grow a crop, but where this is a supplemental water right, they could reduce their canal deliveries toward the end of the year and supplement the irrigation use with the well water to extend their season by several weeks if not a couple of months. This is a common practice in the Boise Kuna Irrigation District, since the district generally only supplies 3 acre feet per acre.

Diversion Volume:

Mr. King recommended a diversion volume of 490 af. However, this is a supplemental water right and we will limit the use to 995 af when water right 63-11633 and the Boise Kuna Irrigation District rights are combined (221 acres X 4.5 af per acre = 994.5 af).

Conditions:

Conditions R61 and 01M will be carried forward to licensing. Condition WB7 will be carried forward to licensing, but will be limited to 702 af. Conditions 065 and 105 will be changed to condition 943 as is standard. Condition 121 will be changed to condition 103 as is standard. Condition F06 will be added to show water right 63-11633 uses the same well. Condition X35 will also be added to limit the well use to 0.95 cfs and 490 af when rights 63-11633 and 63-33952 are combined. All other conditions on the permit will not be carried forward to licensing.

The following 2017 imagery shows the place of use (Yellow Border) and the point of diversion (Yellow Dot). The map also shows the number of acres in each 40 acre tract. The shape file showing the place of use was provided by the water right examiner. Please review the Sentinel imagery attached to this memo that clearly shows the entire 221 acres were irrigated, which would include the 65 acres irrigated by water right 63-11633.

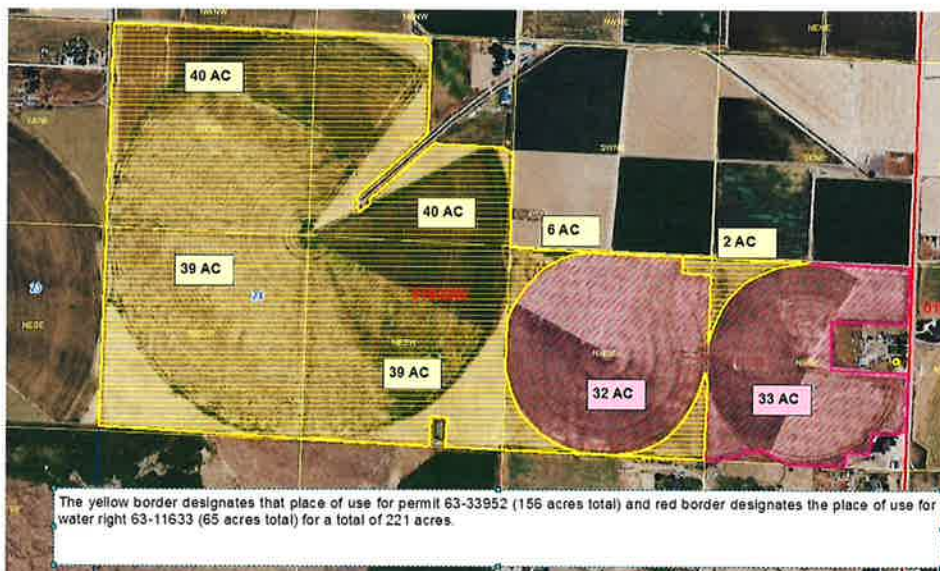


Permit 63-33952 Overlap Map

This map shows the approximate acres authorized to be irrigated from water right 63-11633 at the time the field exam was performed. The original mapping didn't provide the same acre amounts that I could find, but I did find approximately 65 to 66 acres irrigated depending on the rounding and the registration of the aerial imagery and the Public Land Survey (PLS) lines. The place of use found in the Department's mapping records only showed the two 40 acre tracts as being the location of the place of use or approximately 80 acres. It didn't show the specific 65 acres irrigated. This rendition was created to help provide an understanding of where the additional acres irrigated under water right 63-11633 might have been located at the time of the field exam for that water right.



The imagery below shows the current irrigated acres by permit 63-33952 (in yellow) and adjusted overlapping acres authorized by water right 63-11633 (in pink). The adjustment came from the Water Right Examiner, and does seem reasonable. Since the place of use for 63-11633 was not tied to a specific set of acres in the Department's mapping program, and there has been no enlargement of the place of use, the updated shape file for 63-11633 is acceptable.



Acre Comparison 63-33952

Legal Description	Shape File Supplied by Examiner Acres	Water Right 63-11633 Acres	Difference	Acres Recommended in Field Report	Acres Authorized by Permit
SWNW S24 T1S R2W	40		40	40	40
SEnw S24 T1S R2W	30		30	30	32
NESW S24 T1S R2W	39		39	39	40
NWSW S24 T1S R2W	39		39	39	40
NESE 24 T1S R2W	34	32	2	2	3
NWSE S24 T1S R2W	39	33	6	6	7
TOTAL	221	65	156	156	162

Certified Examiner shape file =	221
Combined Acres 63-11633 and field Report =	221
Acres That Need To Be Covered per Shape File =	156
Field Report Recommended Acres =	156

Please Note: In review of these acres, I discovered a discrepancy between 218 acres to 221 acres. I was able to determine that the actual shape file has a total acreage of 219.9 acres. Depending on the projection of the files and the rounding of the acres, the total is influenced by the rounding of each 40 acre tract. Since this is a rounding issue, I have decided to go with Mr. King's acres of 221 acres. Since we can't specifically identify the 8 acres in the NESE and NWSE, Mr. King supplied a map showing the 8 acres in the SE 1/4, which allowed me to create a shape file for the 65 acres authorized by water right 63-11633.

Nelson, Dan

From: Scott King <SKing@spfwater.com>
Sent: Monday, February 11, 2019 5:05 PM
To: Nelson, Dan
Subject: RE: Snake River Dairies

Looks great to me.

Thanks for your time on this one.

From: Nelson, Dan <Dan.Nelson@idwr.idaho.gov>
Sent: Monday, February 11, 2019 2:35 PM
To: Scott King <SKing@spfwater.com>
Subject: RE: Snake River Dairies

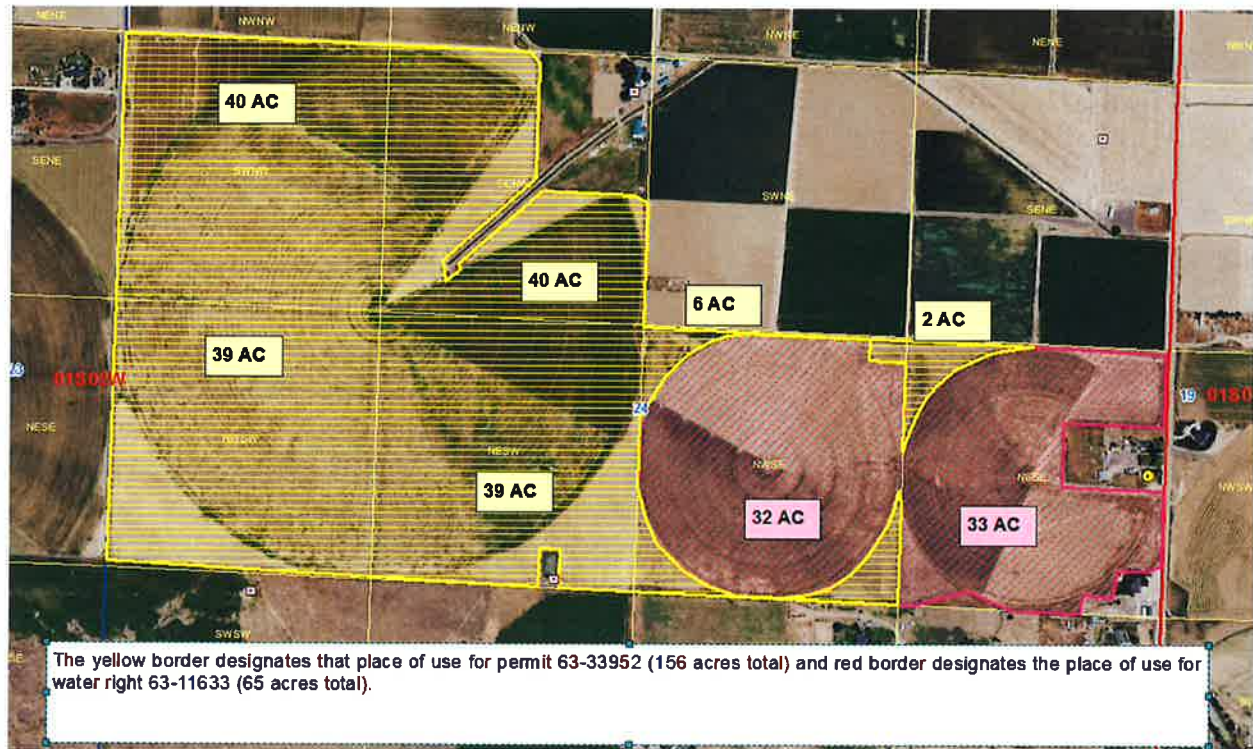
Hi Scott,

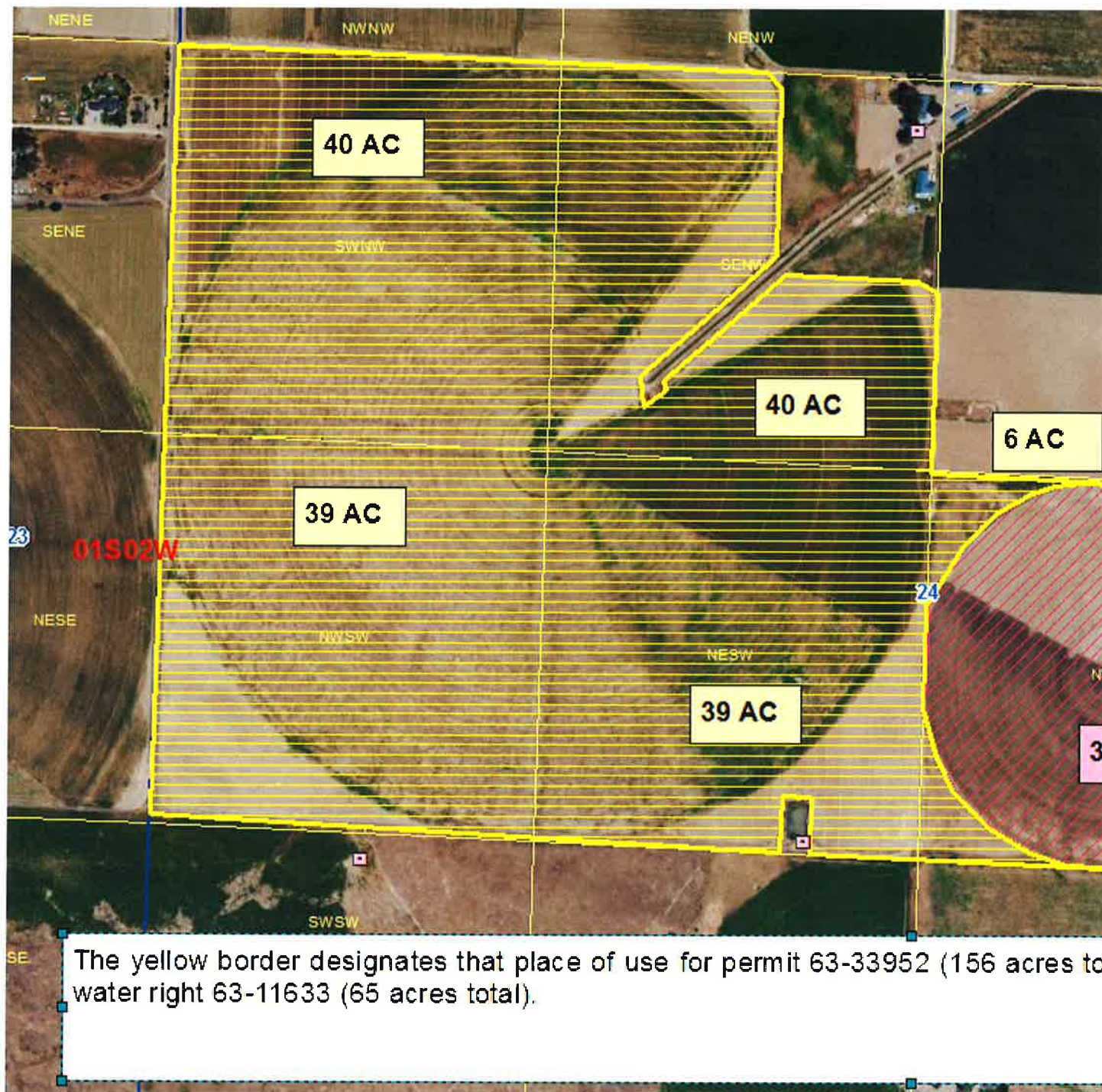
I had to make a couple of tweaks to make everything fit. How do these two shape files look to you?

Dan Nelson

Permit 63-33952

Full attachment to 2/11/2019 email.





From: Scott King [<mailto:SKing@spfwater.com>]
Sent: Friday, February 08, 2019 5:25 PM
To: Nelson, Dan <Dan.Nelson@idwr.idaho.gov>
Subject: Snake River Dairies

Dan,
 Is this the kind of shape that will work?
 Scott

SPF Water Engineering, LLC

300 E Mallard Drive, Suite 350 | Boise, ID 83706

phone 208.383.4140 | **fax** 208.383.4156

email sking@spfwater.com | **web** www.spfwater.com

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Nelson, Dan

From: Scott King <SKing@spfwater.com>
Sent: Friday, February 08, 2019 5:25 PM
To: Nelson, Dan
Subject: Snake River Dairies
Attachments: 63-33952_SE_Qtr.sbn; 63-33952_SE_Qtr.sbx; 63-33952_SE_Qtr.shp; 63-33952_SE_Qtr.shx; 63-33952_SE_Qtr.dbf; 63-33952_SE_Qtr.prj

Dan,
Is this the kind of shape that will work?
Scott

Scott N. King, P.E. | Supervising Engineer

SPF Water Engineering, LLC

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Nelson, Dan

From: Scott King <SKing@spfwater.com>
Sent: Wednesday, January 09, 2019 5:24 PM
To: Nelson, Dan
Subject: RE: GIS files for incoming exams
Attachments: image002.emz; Irrigation POU intersect.zip

Hi Dan,

Attached is the place of use file intersected with QQs. This shape shows 221 acres, not 218, which is consistent with the report. I marked up the table.

I'm not sure what makes more sense in the N1/2 SE1/4. The shape for 63-11633 covers pretty much the whole QQs, so I couldn't identify specific 2 & 6 acre portions, and I don't think there's a way to do it so I'm not sure if there's a difference either way.

I agree an amendment is required since the permit didn't include the SE1/4.

Please call or let me know what you think.

Thanks,
Scott

From: Nelson, Dan <Dan.Nelson@idwr.idaho.gov>
Sent: Wednesday, December 19, 2018 11:44 AM
To: Scott King <SKing@spfwater.com>
Subject: RE: GIS files for incoming exams

Hello Scott,

I ran into a bit of confusion with the shape file and the acres recommended in the field report for water right 63-33952. It appears as though from the map that you want to do a permissible place of use for the acres associated with permit 63-33952. The field report appears to just want to add acres to NESE and NWSE of Section 24, Township 1 South, Range 2 West. The permit didn't include any acres in the NESE or NWSE, so if we include the acres in these 40 acre tracts we would need to an amendment whether it is for a permissible place of use or just to add the acres to the 40 acre tracts.

There is also confusion on how many acres you want to cover with the permit. The map shows a difference of 153 acres when subtracting the acres already licensed from 63-11633, while your field report recommends 156 acres. Do you want to cover an additional 3 acres already covered by water right 63-11633, or do you want to limit the acres recommended to 153 acres? I reviewed the shape file you submitted and I thought it was very generous, so I don't think we could allow more acres when the two rights are combined to more than the 218 acre shape file you submitted. This could be a rounding issue, but we do not do tenths of an acre of places of use larger than 10 acres.

Please see the comparison chart below that shows what I am seeing from the data you supplied. Please let me know what you think, and we can go from there.

Thank you.

Dan Nelson

Acre Comparison 63-33952

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SENW S24 T1S R2W	29 30		29 30	30
NESW S24 T1S R2W	39		39	39
NWSW S24 T1S R2W	39		39	39
NESE 24 T1S R2W	33 34	32	1 2	2
NWSE S24 T1S R2W	39	33	6	6
TOTAL	218 221	65	153 156	156

These 40 acre tracts are not included in the permit.

Certified Examiner shape file =	218
Combined Acres 63-11633 and field Report =	221
Acres That Need To Be Covered per Shape File =	153
Field Report Recommended Acres =	156

From: Scott King [<mailto:SKing@spfwater.com>]
Sent: Tuesday, December 04, 2018 5:22 PM
To: Nelson, Dan <Dan.Nelson@idwr.idaho.gov>
Subject: GIS files for incoming exams

Dan,
Attached are POD and POU shapes for two exams that will be incoming soon for Snake River Dairies LLC.
63-33952 & 63-33639

As always, please let me know if you have any questions.

Thanks,
Scott

Scott N. King, P.E. | Supervising Engineer

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