

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
IN-OFFICE REVIEW/BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATIONPermit No: 92-10109Exam Date: 5/23/2016

1. Does this qualify for an in-office field exam (IDAPA 035.02.r)? X Y N
- Irrigation of 5 acres or less
 - Storage of up to 14.6 AF for stockwater purposes only
 - Any use other than irrigation or storage, if the combined diversion rate is 0.24 cfs or less
 - Other < >

2. Current Owner: Name: Joel and/or Cindy Newsom
- Owner of Record Correct? X Y N
- Address of Record Correct? Y N
- If No: Address

Tax lot data shows Newsom Living Trust as the owners of the property.

3. Beneficial Use Fees have been paid: X Y N Receipt No: C0

4. SOURCE TRIBUTARY

St Maries River

St. Joe River

Method of Determination: GIS and Taxlot DataChange in Source: Y X N**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
95-10351	Ground Water	Domestic	Decree

Comments: Water right 95-10351 is a domestic ground water right that does overlap the place of use. This owned by the Newsome's and supplies their domestic needs. This water right shouldn't be an issue. Water right 92-10351 and 92-10961 are water rights for the neighbors to the east. 92-10961 is a permit from the St. Maries River for irrigation and 92-10351 is a decreed right from ground water.

2. Other water rights with the same point of diversion: NO Overlap

Water Right No.	Source	Purpose of Use	Basis
NONE			

Comments: Water right is a domestic ground water right that does overlap the point of diversion, but it is for ground water and not diverted from the same pump. This owned by the Newsome's and supplies their domestic needs. This water right shouldn't be an issue. Water right 92-10351 and 92-10961 are water rights for the neighbors to the east. 92-10961 is a permit from the St. Maries River for irrigation and 92-10351 is a decreed right from ground water.

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

Source	Govt. Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.		County
River Pump			NW	NE	8	44N	1W	B.M.	BENEWAH
River Pump			SW	NE	8	44N	1W	B.M.	BENEWAH
								B.M.	

Method of Determination: GIS and Tax Lot data.Change in POD? X N Amendment Required? X N**2. PLACE OF USE:** Use: Irrigation

TWP	RGE	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
44N	1W	8		0.4	3.1														3.5
		Lot #																	
Total Acres =																			

Method of Determination: GIS and Tax Lot Data The tax lot straddles the 40 acre tract lineChange in POU? X N Amendment Required? X N Delivery System Diagram Attached (required). Indicate all major components and distances between components.

Indicate weir size/pipe as applicable.

 X Aerial Photo Attached (required for irrigation of 10+ acres). Photo of Diversion and System Attached

4. Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
River Pump	Pacer	5.5	SE2ULE950	Pacer	SE2ULE950
Braided Channel Pump	Honda	1.5	WX10A4	Honda	WX10A4

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
NONE						

2. Measurements: No measurement is required for an in-house exam.

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method:

A theoretical calculation was not used on this permit, since there appears to be two separate pumps. The owner did supply pump information on the two pumps, and I was able to download the pump curves for these pumps. The permit allowed up to 0.10 cfs or 45 gpm. The 5.5 Hp Pacer pump can pump the 45 gpm with a Total Dynamic Head (TDH) of approximately 110 feet, which would be reasonable for a lift of approximately 5 to 10 feet from the river and 35 to 40 psi for sprinklers. The 1.5 Hp Honda pump only has a maximum of 34 gpm, and if it is pumped under pressure, the flow rate reduces dramatically. The 1.5 Hp pump suggests that the pumps are used to wild flood the pastures instead of using sprinklers. There is more than enough capacity through these two pumps to supply the 0.10 cfs for flood irrigation, and there is adequate capacity if they use sprinklers to irrigate the pasture. Either way, these two pumps can supply 0.10 cfs.

Pump Curve = More than 0.10 cfs is possible.**Acre Limits = 3.5 acres X 0.03 cfs per acre = 0.105 cfs****Permit allowed = 0.10 cfs**

I am recommending a diversion rate of 0.10 cfs, since maximum rate per acre doesn't exceed the permitted amounts. The permit was limited to 0.10 cfs or 0.02 cfs per acre, but there is no explanation in the file to show why the maximum amount was not sought or why the agent reviewing the permit didn't inquire why the diversion rate was below the amount allowed.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 3.5 \text{ acres} \times 3 = 10.5 \text{ af}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.10 \text{ cfs} \times 214 \times 1.9835 = 42.4 \text{ af}$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = 10.5 \text{ af}$$

2. Volume Calculations for Other Uses:

N/A

G. PURPOSE OF USEIrrigation X Y N # Stock Domestic # of Homes 1

Other: < >

Change in Purpose of Use? Y NMethod of Determination: Taxlot data and conversations with owner.If Yes: From Use To Use Amount CFS AFA **H. NARRATIVE/REMARKS/COMMENTS**

This permit qualifies for an in-house exam. The application and permit state that there are two points of diversion that used to divert water from the St. Maries River to the property. An email from the permit holder confirms the two points of diversion and the 3.5 acres found to be irrigated from this system. The point of diversion in the SWNE appears to be on a ditch, but the river has a major bend in this area, and the entire bend looks like it is very close to river level. I am assuming the point of diversion in the SWNE is actually diverted from an old river channel that still has water or a braid of the river channel itself.

The proof of beneficial use state that they had complied with the fish screen requirements.

The season of use on the permit didn't match the standard for the Department. I could find no justification in the file for the longer season of use, so I changed the season of use at licensing to the standard season of 4/1 to 10/31.

Condition 2 (26A) will be removed at licensing, but the remainder of the conditions will be carried forward to licensing.
Condition 5 (X15) will be modified to state that the fish screen shall be maintained.

Have conditions of permit approval been met? ☒ Yes ☐ No**I. RECOMMENDATIONS****1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
Irrigation	04/01 to 10/31	0.10 CFS	10.5 AF
<u>Totals:</u>		0.10 CFS	10.5 AF

*Please Note: No volume will be included on the license, since this is a surface water right.

2. Recommended Amendments☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ None

Other: < >

J. AUTHENTICATION – DANIEL A. NELSON – STAFF HYDROLOGIST

Field Examiner's Name _____ Date _____

Reviewer _____ Date _____

Field Exam Map -- Permit 92-10109 -- By Dan Nelson

The water is diverted from the main channel of the river, and what appears to be a portion of the old channel or a braided channel of the river. These two points of diversion irrigated approximately 3.5 acres.

River Pump from the main channel

Yellow border Possible Irrigation

Newsome Parcel bordered in green

River Pump from the Braided Channel

44°N01W

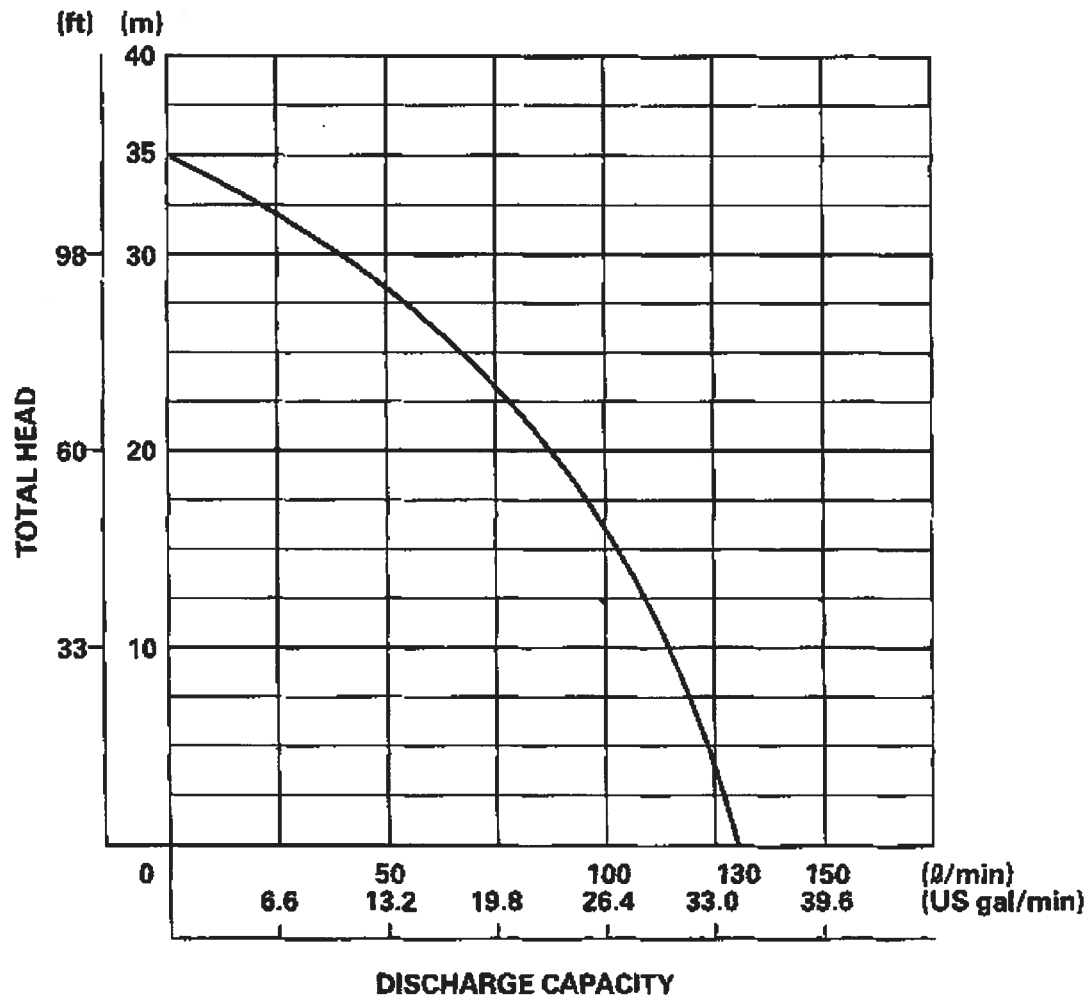
TECHNICAL & CONSUMER INFORMATION

Pump

Suction port diameter	1.0 in (25 mm)
Discharge port diameter	1.0 in (25 mm)
Total head (maximum)	115 ft (35 m)
Suction head (maximum)	23 ft (7 m)
Discharge capacity (maximum)	34.3 US gal (130 l , 28.6 Imp gal) per minute
Self-priming time	120 seconds at 16.4 ft (5 m)
Pressure (maximum)	43 psi (299 kPa , 3.05 kgf/cm ²)
Continuous running time	Approximately 65 min (actual time varies with pump load)

Pump performance curve

As total head increases, discharge capacity decreases. The following graph shows the relationship between pump discharge capacity and total head, while pumping clear water at sea level.



PACER

ECONO-AG SERIES

BULLETIN
PAP-5000-H
April 2014

SELF-PRIMING CENTRIFUGAL PUMPS FOR AGRICULTURE

A top line pump . . .



. . . at a bottom line price!

The Econo-Ag Pump is the original thermoplastic self-priming centrifugal pump for agriculture with the highest flow of any comparable plastic pump on the market.

- Housing, volute and impeller: glass-reinforced polyester.
- Rubber parts: EPDM
- Shaft seal: stainless steel with carbon and ceramic faces, EPDM fitted.
- All external and internal fasteners: stainless steel
- Maximum working pressure: to 50 psi
- Maximum flow: to 200 GPM
- Shipping weight:
44 lbs. for 1½" or 2", 550 series engine driven
49 lbs. for 2", 950 series engine driven pump
- Consult Factory for optional 'PROTEK' Engine Protection System

PACER PUMPS fitted with all EPDM rubber parts can be used for:

Atrazine	Honcho
Bicep	Lannate
Bladex	Lasso
Bronco	Modown
Bullet	N-Serve 24
Liquid Nitrogen Solutions	Pathway
Phosphoric Acid Solutions	Ranger
Dual	Roundup
Extrazine	Sevin 4 Oil
Fallowmaster	

NOTE:

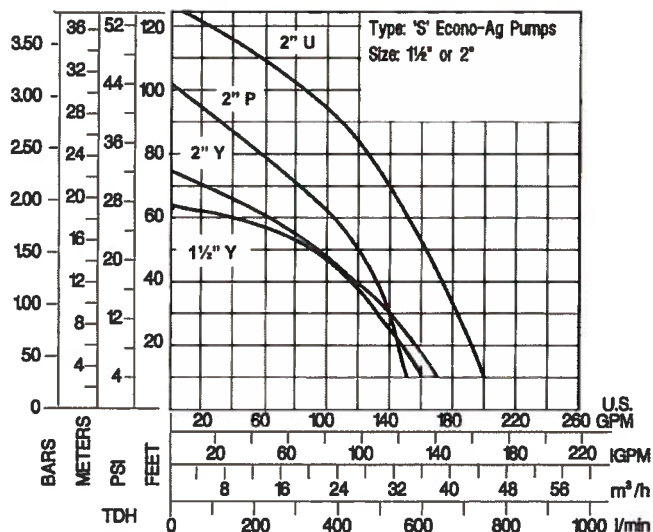
Some agricultural chemicals and certain carriers require a pump fitted with all Viton® rubber parts. These chemicals include:

Banvel	Pathfinder	* Consult Factory for
Dimethoate	Sutan	use with chemicals
Eptam	Treflan	not listed
Lorsban		

To order an all Viton fitted pump, change the sixth digit of the model number listed below from L to V. Consult factory for Viton fitted pricing. Never use gas engine driven or other non-explosion proof powered pumps for pumping flammable liquids such as gasoline. AN EXPLOSION AND SERIOUS INJURY MAY RESULT IF THIS WARNING IS IGNORED. For safe operation, read and follow all safety precautions in Operator's Manual. Consult Factory for specific liquid handling recommendations.

MODEL NUMBERS AND FLOW RATES

MODEL NUMBER	PORT SIZE/ CURVE	cc	FLOW @ 10' TDH
SE1½YL E550	1½"/Y	127	160 GPM
SE1½PL E550	1½"/P	127	150 GPM
SE2YL E550	2"/Y	127	170 GPM
SE2PL E550	2"/P	127	150 GPM
SE2UL E950	2"/U	205	200 GPM



Nelson, Dan

From: Joel Newsom [jnewsom@hughes.net]
Sent: Sunday, May 22, 2016 10:56 AM
To: Nelson, Dan
Cc: Cindy Newsom
Subject: RE: Licensing of permit 92-10109

Hi Dan,

It looks like you have the appropriate areas and pump sites identified. We use a Pacer pump, 5.5 HP, to draw water from the river. We also have a small Honda WX10A4, 1.5 HP, at the second location. We would like to someday replace this small pump for a second Pacer 5.5 HP pump.

Thanks,

Joel & Cindy Newsom
208-245-6843

From: Nelson, Dan [<mailto:Dan.Nelson@idwr.idaho.gov>]
Sent: Thursday, May 19, 2016 8:45 AM
To: jnewsom@hughes.net
Subject: Licensing of permit 92-10109

Dear Mr. and Ms. Newsom;

Our office received your proof of beneficial use statement on April 18, 2016 for permit 92-10109. This permit allowed you to develop up to 5 acres of irrigation to be diverted from 2 locations on the Saint Maries River. The permit is small enough, that with a little assistance from you, we can verify the water use without actually visiting the site, unless you wish to have someone meet with you on sight to verify the water use.

I have been asked to review this permit to verify the water use so it can be licensed. In my review of the permit, I could only find approximately 3 ½ acres being irrigated. I have attached a map that shows the ground I thought could have been irrigated. With the numerous trees in the area, I wanted to send you copy of the map to make sure I have correctly outlined the area you irrigate from the Saint Maries River. Please look at the attached map, and let me know if there is any areas that I may have missed. If I have missed some irrigated ground, you can print off the map and mark where you irrigate and send it back to me.

I also would like to know a bit more about the 2 places where you pump (divert) water from the river and from the old channel of the river. Do you use one portable pump for both locations, or do you have two pumps, one at each of the two locations? Can you give me the horsepower for the pump(s).

I will hold off licensing this permit for a couple of weeks to wait to hear back from you. If I don't hear back from you by July 6, 2016, I will assume that my map is correct, and I will license the permit accordingly. My goal is to license your permit as quickly and accurately as possible, but I do want you to be comfortable and fully understand the process, so please don't hesitate to contact me if you have any questions or concerns.

Respectfully,

Daniel Nelson
Staff Hydrologist

Idaho Department of Water Resources
Telephone (208) 287-4856
Fax (208) 287-6700 (attn: Dan Nelson)



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