

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-22901

Exam Date: 6/28/2016

1. Current Owner:

KEITH O NEIL HELMICK 16 E INDIAN CREEK RD MAYFIELD ID 83716 (208)386-9679 And/Or

SANDRA R HELMICK 16 E INDIAN CREEK RD MAYFIELD ID 83716 (208)386-9679

2. Accompanied by: Neil Helmick

Phone No: 208-867-3616

Address: same as above

Relationship to Permit Holder: permit holder

3. SOURCE:

SPRING

TRIBUTARY:

MALAD RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None

2. Other water rights with the same point-of-diversion: None

C. DIVERSION AND DELIVERY SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

SPRING SE¼NW¼SE¼ Sec. 25, Twp 01S, Rge 10E, B.M. ELMORE County

Method of Determination: ArcMap aerial imagery and site visit.

2.

PLACE OF USE: WILDLIFE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
01S	10E	25					X												

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
01S	10E	25		X					X										

Method of Determination: ArcMap aerial imagery, site visit, and GPS coordinates collected with a Garmin GPS unit.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

X Indicate weir size/pipe as applicable.X Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must beX 1:24,000 or greater.X Aerial Photo Attached (required for irrigation of 10+ acres).X Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Pump in spring box		1			

*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

2. Measurements: No measurement required per Beneficial Use Exam Rules.

E. FLOW CALCULATIONS

Measured Method: NA

Additional Computation Sheets Attached

Theoretical calculation of flow:

$$8.8 \times 1.0 \times 0.70/368 + (20 \times 2.31) = 0.020 \text{ cfs (rounded from 0.015)}$$

Where 8.8 is a constant, 1.0 is the pump HP, 0.7 is the assumed efficiency, 368 is the lift in feet, 20 is the assumed pressure in PSI, and 2.31 is the height of a column of water that exerts one PSI of water pressure.

F. VOLUME CALCULATIONS**1. Volume Calculations for Irrigation:**

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

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

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

2. Volume Calculations for Other Uses: No volume required under Beneficial Use Exam Rules. Use falls under 42-111(a) stockwater, so right will have a 13,000 gallon per day limit in the water right conditions. Wildlife use is minimal.

G. NARRATIVE/REMARKS/COMMENTS

The field exam for permit 37-22901 was accomplished on June 28, 2016 with permit holder Neil Helmick present. Cattle are not turned out on the range on the Helmick ranch until August, so no cattle were present, but water was present in the system. A small, approximately 2' by 2' by 2' perforated spring box collects water from the spring near the surface and transports it by gravity in a 4" pipe to a cylindrical 3' by 10' cistern. Water that is not pumped into the system is returned to the stream below the spring in a 4" overflow pipe. From the cistern, water is pumped out to the system by a 1.0 HP (permit holder was not sure of HP; the Natural Resources Conservation Service technician who worked on the project thought pump was "about 1 HP") solar powered submersible pump. Water is carried from the cistern to the 4000 gallon storage tank in a 2" diameter underground HDPE pipe. From the storage tank, the water is fed by gravity in a 1.25" diameter plastic pipe to two sets of 2 interconnected plastic 1000 gallon stock water troughs equipped with float valves to shut off flow when the tanks are full. The water for the wildlife area is supplied by a 2" pipe that serves as the overflow for the storage tank. On the day of the field exam, several sage grouse were observed within a few hundred yards of the wildlife area, so the wildlife portion of the permit could be deemed a success. The wildlife area is fenced to exclude cattle.

Recommend licensing at the permitted rate of 0.02 cfs. An amendment of permit will be sought because the system was developed in different QQs from what was permitted

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER	01/01 to 12/31	0.02 CFS	
WILDLIFE	01/01 to 12/31	0.02 CFS	
<u>Totals:</u>		0.020 CFS	

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

I. AUTHENTICATION

Field Examiner's Name  Date 08/04/2016

Reviewer _____ Date _____



Point of diversion - spring box

Cistern, solar panel, electrical panel, and overflow to stream



Field Exam 37-22901



Views of the 4000 gallon storage tank - #5 on map



Field Exam 37-22901



East set of stock tanks - #2 on map

Hydrant and float valve on east set of stock tanks -



Field Exam 37-22901



West stock tank set - #4 on map

Hydrant and float valve on west set of stock tanks



Field Exam 37-22901



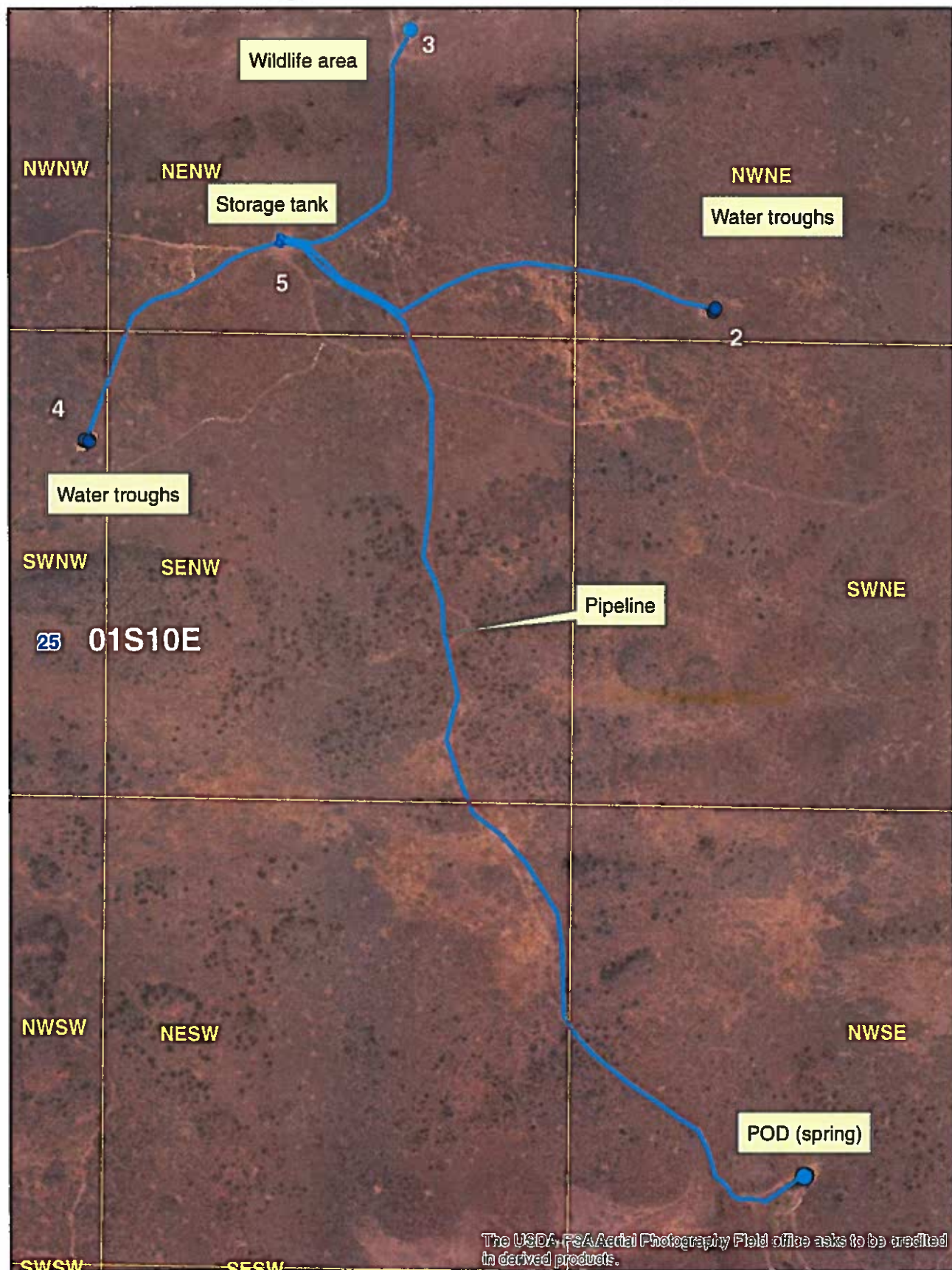
Wildlife watering area – fenced to exclude cattle - #3 on map

Water emerging from pipeline at wildlife watering area



Field Exam 37-22901

Idaho Department of Water Resources



Legend

- Township/Range
- Sections
- QQ

Helmick 37-22901 Stockwater and Wildlife System Diagram

**ATTACHMENT TO
FIELD EXAM 37-22901**

0 0.045 0.09 0.18 Miles





SAGE GROUSE INITIATIVE

Wildlife Conservation Through Sustainable Ranching.



July 28, 2016

To this multi-generational family, conservation and ranching are one and the same

"We've increased the carrying capacity and grass production, which lets us leave more for the wildlife. Plus, we can run more cows." -Neil Helmick

Story and photos by Jesse Bussard

Driving across Neil and Sandy Helmick's 4,000-acre property near Hill City, Idaho, you might think you were visiting a nature preserve instead of a working ranch. Their property is located near the heart of the state's Camas Prairie, an area named for the native Indian Camas lily which emerges each spring. Along with the abundance of wildlife and diverse plants which call the ranch home, the area is also prime habitat for the greater sage-grouse.

The Helmicks, along with their son, Chad, daughter-in-law, Sarah, and daughter, Darcy, are strong advocates for conservation and the ranching

ATTACHMENT TO
FIELD EXAM 37-22901

way of life. To this multigenerational ranching family, the duo is one in the same.



The Helmicks are all strong advocates for conservation and the ranching way of life. (Frc Chad, Sarah, Sandy, Darcy. Back: Neil.)

"It just makes everything better," says Chad. "I'm extremely into hunting, and it seems like the animals that are here—the birds, elk, deer, and such—stay here longer and are getting progressively greater in numbers."

Neil estimates the family operation, which is spread out across three Idaho counties, spans a sum of nearly 40,000-acres consisting of private, leased, state, and federal lands. In addition to a herd of approximately 600 mother cows and 170 replacement heifers, the family also produces potatoes, corn, and beans on their properties to the south near Bliss.

The family's Hill City property, which is comprised of largely sagebrush steppe and some irrigated pastures, lies within a few miles of a well-known lek where sage grouse mate each spring. In addition, meadows across the ranch serve as essential habitat to sage grouse during their nesting and brooding periods.

In 2013, when there was high potential that the bird might be listed under the Endangered Species Act, the Helmicks chose to take proactive measures to ensure their lands and livelihood were protected.



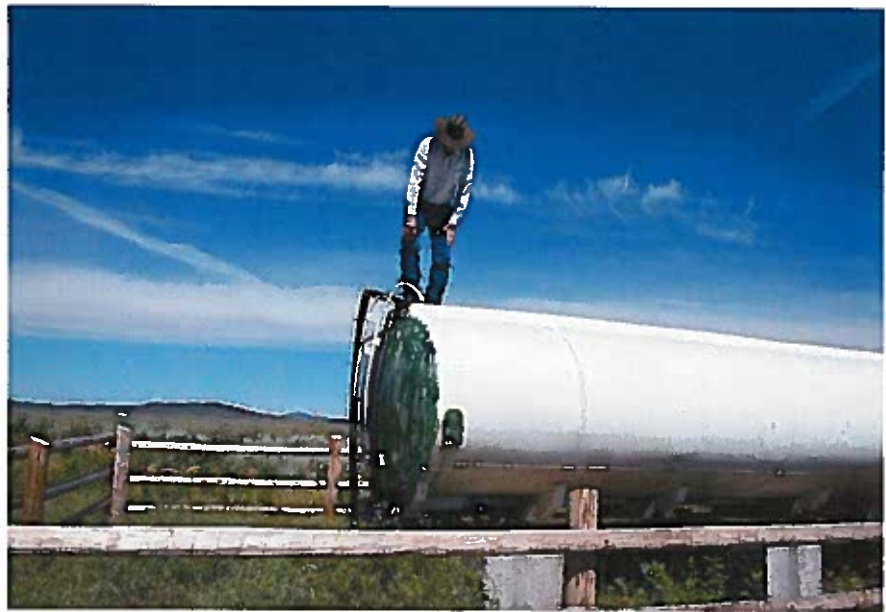
With the help of SGI range and wildlife conservationist Ed Contreras, the Helmicks have in place numerous conservation projects on their Idaho ranch.

The family implemented voluntary conservation projects in partnership with the Natural Resource Conservation Service-led Sage Grouse Initiative (SGI) to ensure sensitive riparian areas and habitat remained undisturbed by livestock for wildlife and sage grouse during critical brood rearing periods in June and July.

Among the first steps the Helmicks took was to adopt a prescribed grazing plan. Now, the family waits until June 15th to bring cattle to the Hill City ranch to graze, keeping the herd on irrigated meadows in the lowlands before then. Come early August, they move the cattle to graze in upland pastures.

Deferring grazing in upland areas of the ranch allows sage grouse to use prime nesting and brood rearing habitat in June and July. In addition, keeping cattle out of the uplands until late summer also ensures plenty of residual cover is left to provide nesting areas for the birds, and that native grasses have time to fully mature and set seed.

Thanks to this new grazing system, says Neil, "We've increased the carrying capacity and grass production, which lets us leave more for the wildlife. Plus, we can run more cows."



A water tank stores water for transport, ensuring cattle always have access to fresh water while leaving riparian and wet areas open to wildlife and undisturbed by livestock.

Along with prescribed grazing, the Helmicks have partnered with SGI on several more improvements across their Hill City property. The NRCS helped fund off-site water tanks, a spring development, a solar pump, pipeline, and water storage tank which now supply water to upland pastures for both livestock and resident wildlife. These improvements enhanced livestock grazing distribution and pasture utilization. In addition, the Helmicks put up post and rail fences around the springs to protect these sensitive riparian areas, which are important habitat for a host of wildlife species.

"The pipeline project really helped us disperse the cows," says Neil. "It's later in the year when we use that pasture, so it's hot, dry, and dusty. With water tanks on top of the mountain instead of on the bottom, the cows stay there and go through the pasture a whole lot better."

Most recently, the Helmicks finished a project with U.S. Fish and Wildlife's Partners for Fish and Wildlife Program to develop an overflow system that increases the productivity of a wet meadow on their ranch. During late summer, these wet areas become vital foraging ground for growing sage grouse broods.



Wet areas like this spring are important habitat for sage grouse and wildlife, and vital to ranching operations.

"These improvements should last our kid's lifetime," says Neil.

To measure the progress of their conservation efforts and stay on track, the Helmicks voluntarily monitor their land with photo points to gauge how their management is affecting the landscape.

Beyond their work with SGI, the Helmicks also strive to protect the broader landscape of their community. Neil is also a member of the the region's Mountain Home Sage Grouse Local Working Group, which is made up of a variety of community stakeholders concerned with sage grouse.

"Everyone has their own needs, but it's important to have good working relationships with all stakeholders and always try to improve them," says Neil.

Neil's daughter, Darcy, is a public lands advocate on the state and national level for ranchers, and has been instrumental in starting a local Rangeland Fire Protection Association (RFPA) for the area. In 2014, the RFPA and Bureau of Land Management received the prestigious Pulaski Award, an honor given annually by the National Interagency Fire Center for outstanding contributions to wildfire-fighting efforts. Along with Darcy, Neil and Chad are also certified rangeland firefighters who do their part to protect their community and landscape from wildfires, one of the top threats to sage-grouse populations in the Great Basin region.



The Helmick's Hill City property is home to an abundance of wildlife.

The Helmicks are a shining example of dedicated land stewards in the Idaho ranching community. Their proactive conservation efforts are making a difference for sage grouse and other wildlife, and benefiting their livestock, too.

"Without willing ranchers like Neil and Sandy, the Sage Grouse Initiative program would not be able to improve sage grouse habitat to this quality and extent on private lands," says Ed Contreras, SGI's range and wildlife conservationist who works with the family.

Neil agrees, noting the success shows, "The ranch is 200% better today than when we purchased it 8 years ago. Working with SGI has helped reward us for what we'd already been doing."

[Tweet](#)