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DEC 21 2009

FORM 202 10/07

Ident. No. 22-13912

Department of Water Resources
Eastern Region

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT
To appropriate the public waters of the State of Idaho

AMENDED

AMENDED

1. Name of Applicant Mark Harrington Phone 208-354-2900
Mailing address PO Box 300, Driggs, ID 83422 Email NA
Representative: Rocky Mountain Environmental Associates Phone: (208) 524-2353 Fax: (208) 524-1795
482 Constitution, Ste 303, Idaho Falls, ID 83402 Email: kmoore@rockymountainenvironmental.com
2. Source of water supply Unnamed stream which is a tributary of Elliot Creek
3. Location of point of diversion is Township 4N Range 45E Sec. 15, in the 1/4, SW 1/4, SW 1/4, Govt. Lot , E.B.M., TETON County; additional points of diversion if any: T4N R45E SEC 15 SWSW and SESW for three PODs
4. Water will be used for the following purposes:
Amount 11.8 AF for Storage for Wildlife purposes from 1/01 to 12/31 (both dates inclusive)
Amount for purposes from to (both dates inclusive)
(cfs or acre-feet per annum)
Amount for purposes from to (both dates inclusive)
(cfs or acre-feet per annum)
5. Total quantity to be appropriated is (a) and/or (b) 11.8
cubic feet per second acre feet per year
6. Proposed diverting works:
 - a. Describe type and size of devices used to divert water from the source Three on-stream unlined ponds created for wildlife storage
 - b. Height of storage dam feet; active reservoir capacity acre-feet; total reservoir capacity 6.3 acre-feet
 - c. Proposed well diameter is inches; proposed depth of well is feet
 - d. Is ground water with a temperature of greater than 85°F being sought? No
 - e. If well is already drilled, when? ; Drilling firm ;
Well was drilled for (well owner) ; Drilling Permit No.
7. Time required for completion of works and application of water to proposed beneficial use is 1 years (minimum 1 year)
8. Description of proposed uses (if irrigation only, go to item 9):
 - a. Hydropower; show total feet of head and proposed capacity in kW.
 - b. Stockwatering; list number and kind of livestock.
 - c. Municipal; show name of municipality.
 - d. Domestic; show number of households.
 - e. Other; describe fully. Three on-stream unlined ponds created for wildlife as a part of the conservation easement

9. Description of place of use:

- If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

			NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTALS
Twp	Rge	Sec	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
4N	45E	15											W	W					

Total number of acres to be irrigated: NA

- Describe any other water rights used for the same purposes as described above. Include water delivered by a municipality, canal company, or irrigation district. If this application is for domestic purposes, do you intend to use this water, water from another source, or both to irrigate your lawn, garden, and/or landscaping? No other water rights appurtenant. Application is for non-consumptive use. No irrigation.
- Who owns the property at the point of diversion? Applicant
 - Who owns the land to be irrigated or place of use? Applicant
 - If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: _____
- Describe your proposal in narrative form, and provide additional explanation for any of the items above. Attach additional pages if necessary. Applicant has already completed the lengthy process to add the place of use to the conservation easement. During this process, he was aided by the NRCS and the Teton Land Trust in creating the three unlined ponds on the property for wildlife. The ponds were constructed on a natural stream bed which is fed by a spring to the east. The historically grown vegetation on this property is grass hay. It has been determined that by adding the ponds, consumptive use is decreased. See attached pages for further explanation.
- MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8½"x11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. (A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.)

BE IT KNOWN that the undersigned hereby makes this application for permit to appropriate the public waters of the State of Idaho as herein set forth.

[Signature]
Signature of Applicant (and title, if applicable)

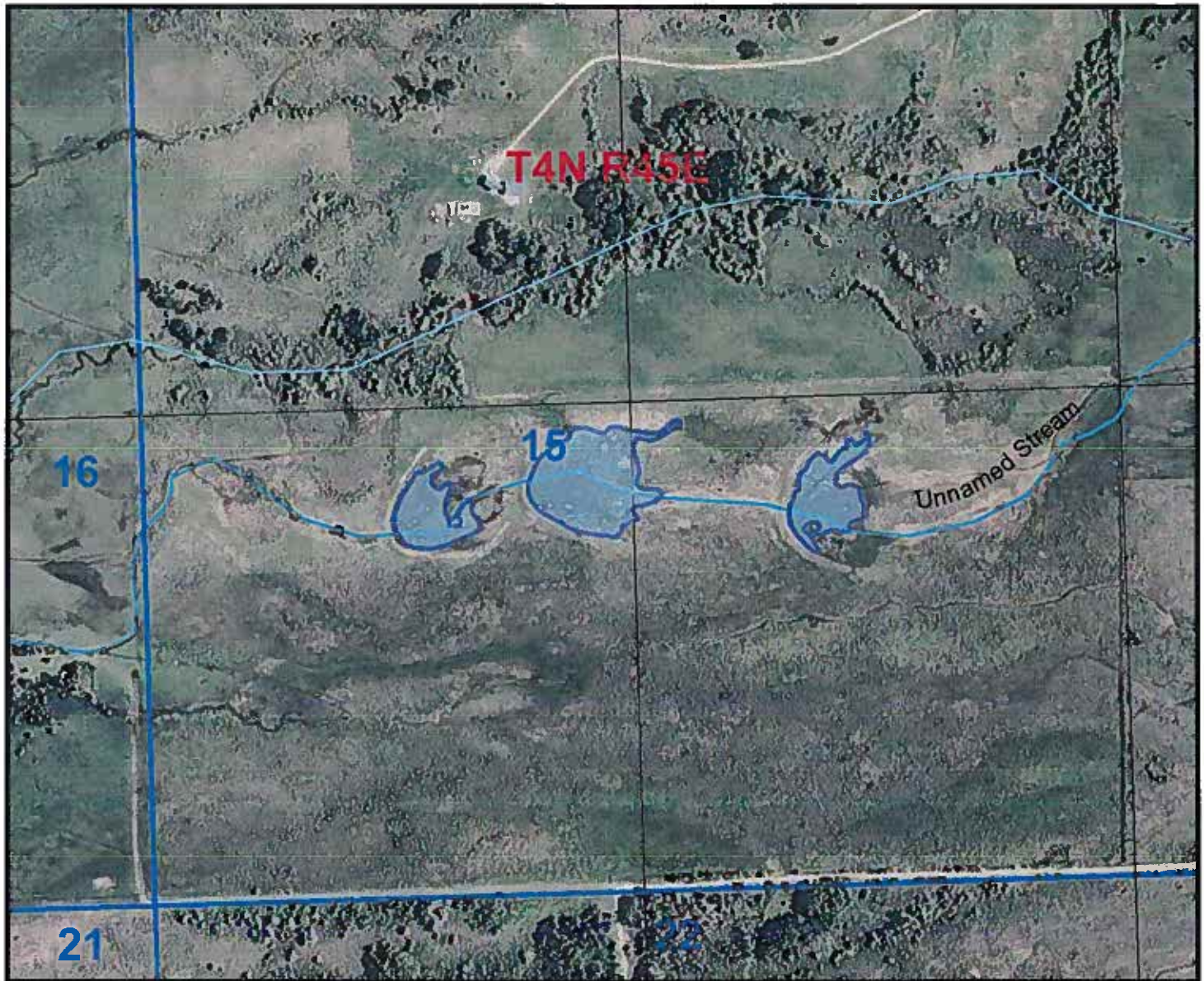
MARK HARRINGTON
Print Name (and Title, if applicable)

For Department Use:

Received by _____ Date _____ Time _____ Preliminary check by _____
 Fee \$ 50.00 Amendment Received by B. Lee # 6035516 Date 12/23/09
 Publication prepared by _____ Date _____ Published in _____
 Publication approved _____ Date _____

Amended Application for Permit

Mark Harrington



2009 Aerial Photography

0 400 800 1,600 Feet

Legend

- | | |
|--|---|
|  Ponds |  Twp & Rng |
|  Unnamed Stream |  Section |
|  Streams |  QQ |



Points of diversion are the ponds.

Application for Permit Mark Harrington Mitigation Plan

The place of use described in the application has historically been covered with natural vegetation, which can be described as grass hay, including timothy, fescue, orchard grass, yarrow, some brome and some wheatgrass. A site visit confirms the vegetation growing across the property. Along the unnamed stream channel, which derives from a spring that flows year-round, there was rough sedge. During the spring and most of the summer months, the ground is saturated to a point that there is standing water in some areas.

Over the last few years, the applicant has been working with the Teton Regional Land Trust and the Natural Resources Conservation Service to create three unlined ponds along the unnamed stream channel for wildlife and to identify the property as a conservation easement. The completed ponds measure 3.15 ac in surface area and 6.3 acre-feet (af) in volume.

In comparison, it has been determined that the ponds consume less water than the historical vegetation grass hay. Using the annual irrigation requirement from Allen and Robison's *Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho* from the Driggs Station, irrigated grass hay consumes 2.07 af/ac/yr (631 mm/ac/yr). The abundance of water on the property as described above allows the grass hay a water consumption, without irrigation, comparable to that of irrigated grass hay. Grass hay on the equivalent surface area as the new ponds, or 3.15 acres, would consume a total of 6.52 acre-feet.

Two methods of calculating evaporation from the three ponds show that there is less consumptive use than that calculated from the grass hay. The first method is based on the evapotranspiration from an open water-shallow system described in the *Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho*. According to the same station, open water-shallow systems consume 1.56 af/ac/yr (476 mm/ac/yr) through evaporation, which totals 4.91 acre-feet from 3.15 acres of ponds. The second method is shown on the Pond Calculations attached, which estimates a total of 5.5 acre-feet of evaporation from the 3.51 acres of ponds. This is the value used to represent the evaporation for this application. Despite which method of representing evaporation is used, replacing 3.15 ac of grass hay with open water decreases the annual water consumption, serving as a net gain to the surface water system. Although the three ponds are not lined, no seepage losses are anticipated due to the high ground water level of the wetland area.

Once full, the ponds will not need to be refilled. Continual maintenance through the ever flowing unnamed stream and the wetlands in which they are located will ensure that the ponds do not dry up. To mitigate for the first time fill and any subsequent refill, it is proposed that 3 acres irrigated under water right 22-12784 located directly north of the ponds be dried up for one season. Grass hay is irrigated on these 3 acres of ground, which consumes 6.3 acre-feet per year. Irrigation will resume the subsequent year.

Approval of this application will not injure downstream users. An overabundance of water flows through and from the applicants property annually. The two downstream users, the Hills and the Weekes, easily obtain all of their water due to the wetland properties of the area. Standing water is prevalent on the applicant's and surrounding adjacent lands of the downstream water right owners.

Pond Calculations
Climate Station: Driggs, Idaho 102676
Project Name: Mark Harrington

Pond Consumptive Use Calculations

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Annual FWW Evaporation (inches)	35	35	35	35	35	35	35	35	35	35	35	35	35
Monthly Distribution (%) #1	1	2	4	7	12	15	19	16	11	6	4	3	100
Monthly FWS Evaporation (in/mo)	0.35	0.7	1.4	2.45	4.2	5.25	6.65	5.6	3.85	2.1	1.4	1.05	35
Avg. Total Precipitation (in/mo) #2	1.42	1.09	1.1	1.24	1.9	1.84	1.11	1.19	1.3	1.23	1.07	1.38	15.87
Pond Loss [(Evap.) - (Precip., in.)] #3	0	0	0.3	1.21	2.3	3.41	5.54	4.41	2.55	0.87	0.33	0	20.92
Pond Surface Area (acres)	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
Total Pond Loss (ac-in)	0.0	0.0	0.9	3.8	7.2	10.7	17.5	13.9	8.0	2.7	1.0	0.0	65.9
Total Pond Loss (ac-ft)	0.0	0.0	0.1	0.3	0.6	0.9	1.5	1.2	0.7	0.2	0.1	0.0	5.5

Summary

Total Water Needed for Pond Annually	Evaporation (ac-ft)	Pond Fill (ac-ft)	Total (ac-ft)
	5.5	6.3	11.8

#1 - Molnau, Myron, Kpordze, Kojo C.S., and Craine, Katherine L., 1992. Monthly shallow pond evaporation in Idaho. ASAE paper PNW 92-111.
#2 - Data collected from the Western Regional Climate Summary, Monthly Climate Summary @ <http://www.wrcc.dri.edu/summary/Climsumid.html> - See attached.
#3 - Note: for months where precipitation exceeds evaporation, the resultant pond loss is set to zero