FUTURE FISHERIES IMPROVEMENT PROGRAM
GRANT APPLICATION

(Please fill in the highlighted areas)
all sections (IA, IB, IC, etc.) must be addressed or the application will be considered invalid

I. APPLICANT INFORMATION

A. Applicant Name: Little Big Warm Ranch LLC/ Diamond Willow Ranch (Willie Doll)

B. Mailing Address: PO Box 1142

C. City: Malta State: MT Zip: 59538

Telephone: 406-658-2120 E-mail: wcdoll_59538@yahoo.com

D. Contact Person: Cody Nagel (Montana Fish, Wildlife, and Parks – Havre Area Fish Biologist)

Address if different from Applicant: 2165 HWY 2 East

City: Havre State: MT Zip: 59501

Telephone: 406-265-6177 X226 E-mail: cnagel@mt.gov

E. Landowner and/or Lessee Name (if other than Applicant):

Mailing Address:

City: State: Zip:

Telephone: E-mail:

II. PROJECT INFORMATION*

A. Project Name: Little Warm Reservoir Dam Repair and Enhancement Project

River, stream, or lake: Reservoir

Location: Township: 27N Range: 28E Section: 29
Latitude: 48.06398 Longitude: -108.14171 *within project (decimal degrees)*

County: Phillips

B. Purpose of Project:

The project will repair and enhance Little Warm Dam to re-establish the pre-existing reservoir habitats and ensure maximum water capacity can be maintained in the reservoir to benefit the fishery. Also, this project will provide for fishing access to Little Warm reservoir for a period exceeding 20 years, actual terms of this agreement are still being discussed.

C. Brief Project Description:

Little Warm Reservoir was constructed in the early 1900's. The dam was originally built with a 2:1 downstream slope and an undersized earthen spillway. In the fall of 1986 a torrential rainstorm caused water to overtop the dam and it failed. The dam was repaired in 1988 to the same elevation, and the earthen spillway was widened to increase water capacity during events similar to that experienced in 1986. Significant water events occurred again in 2011, which caused some sloughing to occur on the dam. Another significant water event occurred again in 2016 and resulted in the dam breaching. The rain event in 2016 was classified as 500-year event, saturated soils combined with the 2:1 slope on the dam and insufficient spillway capacity contributed to the breach.

In April 2017, DNRC completed the hazard classification for the Little Warm Dam. The result of this investigation was that the dam was classified as non high hazard. In essence this means that if the dam failed, the resultant flood of water would not result in loss of life.

This project will take into account the historic events which led to failures of the dam and improve the structure to maximize its longevity as a fishery and valuable aquatic resource. The project will consist of constructing a core along the entire downstream toe and re-shaping the dam from a 2:1 to a 4:1 slope. Re-shaping and widening of the spillway will also occur to efficiently pass water and withstand a 500-year flood event.

Repairing Little Warm Dam will allow existing rock/cobble and littoral habitats to become inundated, providing critical spawning, rearing, and refuge habitats for the fish community. Rehabilitating Little Warm Dam will also initiate the process of re-establishing this popular fishery resource for anglers and outdoor recreationists.

Most importantly, a fishing access agreement between Little Big Warm Ranch LLC and FWP would formalize public access to Little Warm Reservoir for a period exceeding 20 years. Terms of this agreement are still being discussed.

D. Length of stream or size of lake that will be treated: ~150 Surface Acres

E. Project Budget:

Grant Request (Dollars): $ 100,000

Contribution by Applicant (Dollars): $ _____ In-kind $ 291,385.80

(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): $ 30,000 In-kind $ _____

(attach verification - See page 2 budget template)

Total Project Cost: $ 507,385.80

F. Attach itemized (line item) budget – see template

G. Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support and fish biologist support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete supplemental questionnaire (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).

H. Attach land management and maintenance plans that will ensure protection of the reclaimed area.

III. PROJECT BENEFITS*

A. What species of fish will benefit from this project?:

Little Warm Reservoir is comprised of a number of game and prairie fishes. These include: black crappie, black bullhead, brassy minnow, brook stickleback, creek chub, fathead minnow, golden shiner, iowa darter, lake chub, longnose dace, northern pike, northern redbelly dace, tiger muskie, walleye, western silvery minnow, white sucker, and yellow perch.

Repairing and enhancing Little Warm Dam will benefit game fish such as black crappie, walleye, and yellow perch, which utilize the inundated rock/cobble and terrestrial vegetation created from impoundment as spawning habitat. The impounded water will also create excellent rearing habitat for many of the species listed, as well as provide critical refuge under severe drought and winter conditions.

B. How will the project protect or enhance wild fish habitat?:

Wild fish in Little Warm Reservoir would benefit with consistent reservoir water levels that would benefit the riparian and littoral vegetation that is utilized as spawning and rearing habitat, primarily by walleye, yellow perch, and black crappie. Historically, Little Warm Reservoir provided refuge when severe drought or winter conditions persisted in the area, for species found within Little Warm Reservoir and Little Warm Creek.

C. Will the project improve fish populations and/or fishing? To what extent?:

Little Warm Dam breached in October 2016, thus eliminating a popular fishery which existed since the late 1980's. Prior to breaching, Little Warm Reservoir contained walleye approaching six pounds and tiger muskie exceeding 20 pounds. The project will restore reservoir storage capacity and re-establish pre-existing spawning, rearing, and overwinter habitats for the popular game fish species managed in this reservoir. Re-establishing the water storage capacity would also make a pre-existing boat ramp at the Little Warm usable again for anglers.

Little Warm Reservoir has a well documented history of having the proper habitats to maintain self-sustaining populations of yellow perch, black crappie, and walleye. The reservoir has been a popular fishery (summer and winter) since the 1980's and repairing the dam would re-establish angler use and opportunity.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

The project will restore the pre-existing reservoir habitats which benefit the game fish species managed at the reservoir (yellow perch, walleye, tiger muskie, and black crappie). Preserving water quantity and stabilizing water levels in the reservoir resulting from this project will increase the population densities for all species and will directly affect and benefit angler catch rates.

Most importantly, the fishing access agreement between Little Big Warm Ranch LLC. and FWP would formalize public access to Little Warm Reservoir for a period exceeding 20 years. Terms of the agreement are still being discussed.

E. The project agreement includes a 20-year maintenance commitment. Please discuss your ability to meet this commitment.

If future maintenance is required on the reservoir, both the landowner and FWP personnel will be completely committed to ensure all problems are fixed or maintained. Little Big Warm Ranch LLC, Diamond Willow Ranch, and FWP would manage pool elevations and fishing access in such a manner to optimize the fishery.

F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?:

Little Warm Dam breached in October 2016, leaving all aquatic habitats exposed and dry. At this time no aquatic habitats exist at this location. The project will repair and enhance the dam to re-establish historic water storage capacity, inundating existing aquatic habitats. Enhancing the dam will ensure that future dam failure will be minimized, maximizing the aquatic habitats and fish assemblage.

G. What public benefits will be realized from this project?:

Little Warm Reservoir has been open to public fishing since the 1980's and a boat ramp was constructed at the reservoir in the late 1990's. In 2007 public access was lost and ownership of the reservoir changed. Little Big Warm Ranch LLC. purchased the reservoir and surrounding lands in 2015 and contacted FWP about re-establishing fishing access options to Little Warm Reservoir. A 5-year fishing access agreement between FWP and Little Big Warm Ranch LLC was reached in May 2016. Angling interest was immediate due to the longevity of access closure and reports of large walleye and tiger muskellunge inhabiting the reservoir.

The reservoir was last sampled by FWP in May 2016 and revealed healthy walleye (numerous fish approaching 6 pounds) and yellow perch populations. Tiger muskellunge were first stocked by FWP in 1993 and prior to the dam breaching, multiple tiger muskie reaching memorable size (40+ inches and weighing 20+ pounds) were observed or reported as caught. The state of Montana currently manages less than a dozen waters with tiger muskie in them, and the size and number observed in Little Warm Reservoir attract the attention from anglers across the state.

From 1989 to 2007 FWP had stocked 1,096,399 fish into Little Warm Reservoir, most of which were walleye and tiger muskie. Walleye naturally reproduce in Little Warm Reservoir and the stocking strategy is to supplement the walleye population to offset fishing pressure and harvest.

The area surrounding Little Warm Reservoir is susceptible to prolonged periods of drought and severe winter conditions. Many reservoirs within close proximity to Little Warm Reservoir have a history of being unable to sustain fish populations when drought and heavy snow conditions persist. However, Little Warm Reservoir has a large enough storage capacity to sustain fish populations during prolonged drought and winter periods. Both Diamond Willow Ranch and Little Big Warm Ranch LLC have a history of good water management practices. Little Warm Reservoir would maintain better water levels and would continue to provide angling opportunities during prolonged periods of drought and severe winter conditions.

Most importantly, the fishing access agreement between Little Warm LLC. and FWP would formalize public access to Little Warm Reservoir for a period exceeding 20 years. Terms of this agreement are still being discussed.

H. Will the project interfere with water or property rights of adjacent landowners? (explain):

No. The project would likely result in improved water supply conditions for other water users on Little Warm Creek. The property ownership around the project area is limited to Little Big Warm Ranch LLC (land and water rights), Diamond Willow Ranch (water rights), and the State of Montana (lands). Changes in public use of the area would not impact private property of adjacent landowners.

I. Will the project result in the development of commercial recreational use on the site?: (explain):

No, this reservoir and surrounding property would be managed to allow public access for hunting and fishing.

J. Is this project associated with the reclamation of past mining activity?:

No

Each approved project sponsor must enter into a written agreement with the Department specifying terms and duration of the project.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature: Little Big Warm Ranch LLC J. Mark Fries - Manager ~~Diamond Willow Ranch~~ Willie Doll Date: 5-24-17 ~~5-15-17~~

Sponsor (if applicable): _____

***Highlighted boxes will automatically expand.**

Mail To: **Montana Fish, Wildlife & Parks**
Habitat Protection Bureau
PO Box 200701
Helena, MT 59620-0701

E-mail To: **Michelle McGree**
mmcgree@mt.gov
(electronic submissions MUST be signed)

Incomplete or late applications will be rejected and returned to applicant.
Applications may be rejected if this form is modified.

*****Applications may be submitted at anytime, but must be signed and received by the Future Fisheries Program Officer in Helena before December 1 and June 1 of each year to be considered for the subsequent funding period.*****

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Both tables must be completed or the application will be returned

WORK ITEMS (ITEMIZE BY CATEGORY)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	CONTRIBUTIONS: FUTURE FISHERIES REQUEST	CONTRIBUTIONS: IN-KIND SERVICES**	CONTRIBUTIONS: IN-KIND CASH	CONTRIBUTIONS: TOTAL
Personnel* **								
Survey	40	hrs	$80.00	$ 3,200.00		3,200.00		$ 3,200.00
Design	35	hrs	$85.00	$ 2,975.00		2,975.00		$ 2,975.00
Engineering	36	hrs	$90.00	$ 3,240.00		3,240.00		$ 3,240.00
Permitting				$ -				$ -
Admin/Oversight	50	hrs	$100.00	$ 5,000.00		5,000.00		$ 5,000.00
				$ -				$ -
			Sub-Total	$ 14,415.00	$ -	$ 14,415.00	$ -	$ 14,415.00
Travel								
Mileage	1,000	miles	$0.57	$ 570.00		570.00		$ 570.00
Per diem				$ -				$ -
			Sub-Total	$ 570.00	$ -	$ 570.00	$ -	$ 570.00
Construction Materials** **								
Geocell	2,000	sq ft	$1.50	$ 3,000.00				$ -
Fill Dirt	40,000	cu yds	$5.00	$ 200,000.00		200,000.00		$ 200,000.00
Rock	700	cu yds	$50.00	$ 35,000.00		35,000.00		$ 35,000.00
Pit Run Gravel	40	cu yds	$10.00	$ 400.00		400.00		$ 400.00
Hauling Rock	3,000	miles	$5.00	$ 15,000.00		15,000.00		$ 15,000.00
Fencing	3760	linear ft	$1.33	$ 5,000.80		5,000.80		$ 5,000.80
Seed	4	acres	$125.00	$ 500.00		500.00		$ 500.00
Pipe and Headgate			$20,000.00	$ 20,000.00		20,000.00		$ 20,000.00
Geocell Fabric				$ -		500.00		$ 500.00
			Sub-Total	$ 278,900.80	$ -	$ 276,400.80	$ -	$ 276,400.80
Equipment and Labor								
twin engine scrapper	40,000	cu yds	$4.00	$ 160,000.00	100,000.00			$ 100,000.00
D7 Cat	100	hrs	$225.00	$ 22,500.00			20,000.00	$ 20,000.00
Track hoe	150	hrs	$140.00	$ 21,000.00			10,000.00	$ 10,000.00
Track hoe	50	hrs	$100.00	$ 5,000.00				$ -
				$ -				$ -
			Sub-Total	$ 208,500.00	$ 100,000.00	$ -	$ 30,000.00	$ 130,000.00
Mobilization								
Misc				$ 5,000.00				$ -
				$ -				$ -
				$ -				$ -
			Sub-Total	$ 5,000.00	$ -	$ -	$ -	$ -
			TOTALS	$ 507,385.80	$ 100,000.00	$ 291,385.80	$ 30,000.00	$ 421,385.80

026-2017 Little Warm Reservoir Dam Repair

(Revised 5/25/2017)

OTHER REQUIREMENTS:

All of the columns in the budget table and the matching contribution table MUST be completed appropriately or the application will be invalid. Please see the example budget sheet for additional clarification.

*Units = feet, hours, inches, etc. Do not use lump sum unless there is no other way to describe the costs.

**Can include in-kind materials. Justification for in-kind labor (e.g. hourly rates used for calculations). Describe here or in text.

Reminder: Government salaries cannot be used as in-kind match

***The Review Panel suggests that design and oversight costs associated with a proposed project not exceed 15% of the total project budget. If design and oversight costs are in excess of 15%, applications must include a minimum of two competitive bids for the cost of undertaking the project.

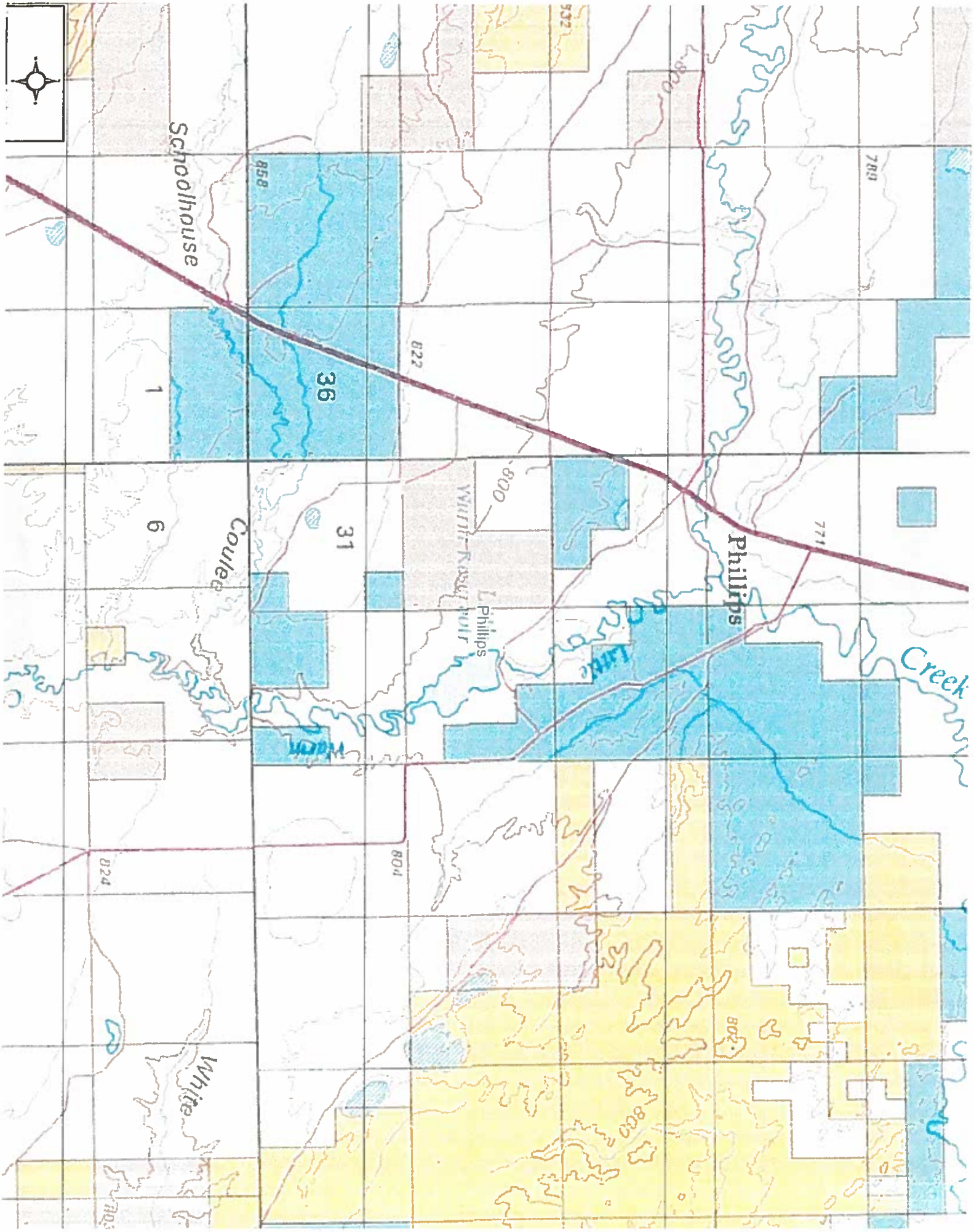
****The Review Panel recommends a maximum fencing cost of $1.50 per foot. Additional costs may be the responsibility of the applicant and/or partners.

026-2017

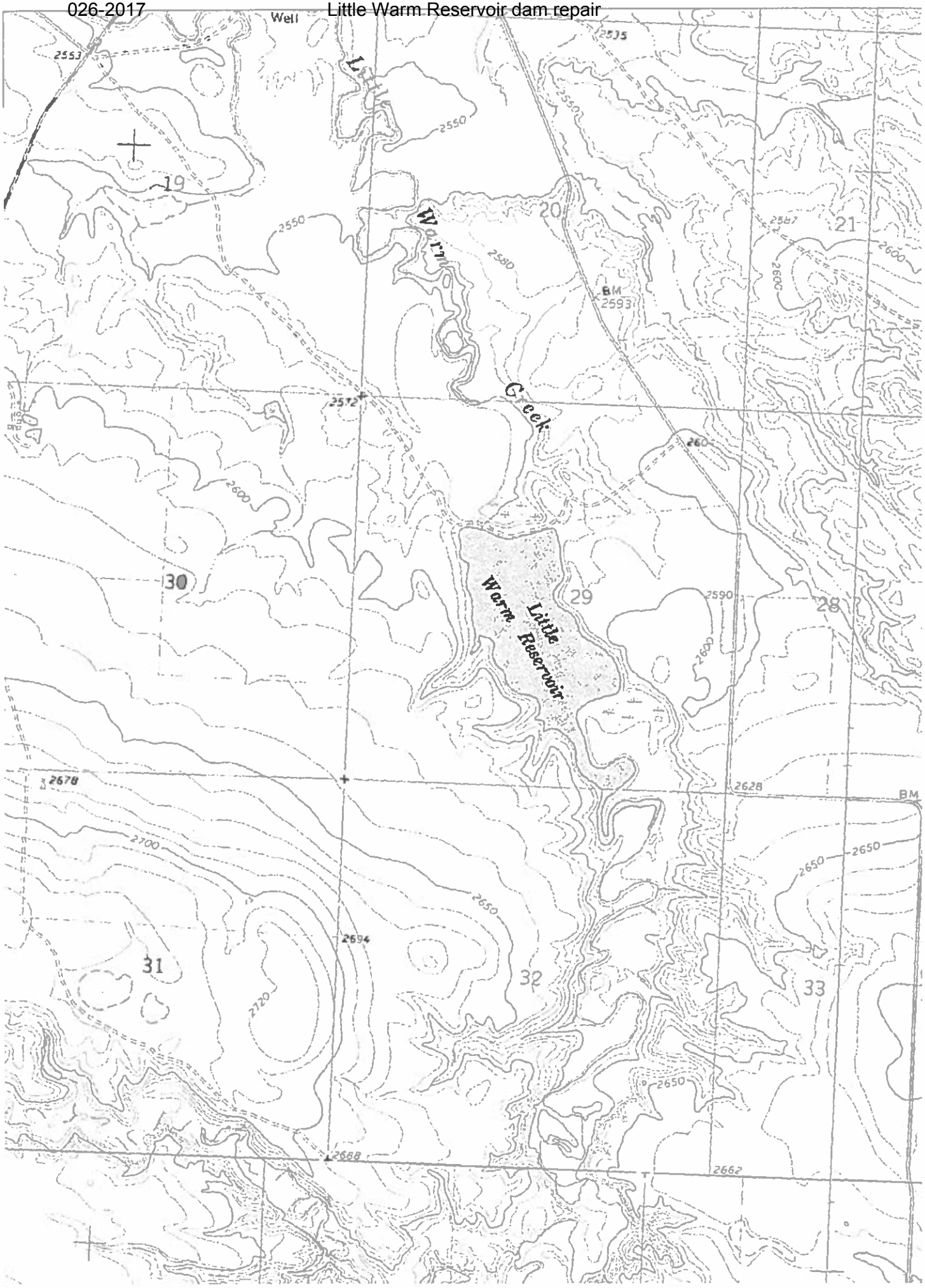
Little Warm Reservoir dam repair

MATCHING CONTRIBUTIONS (do not include requested funds)

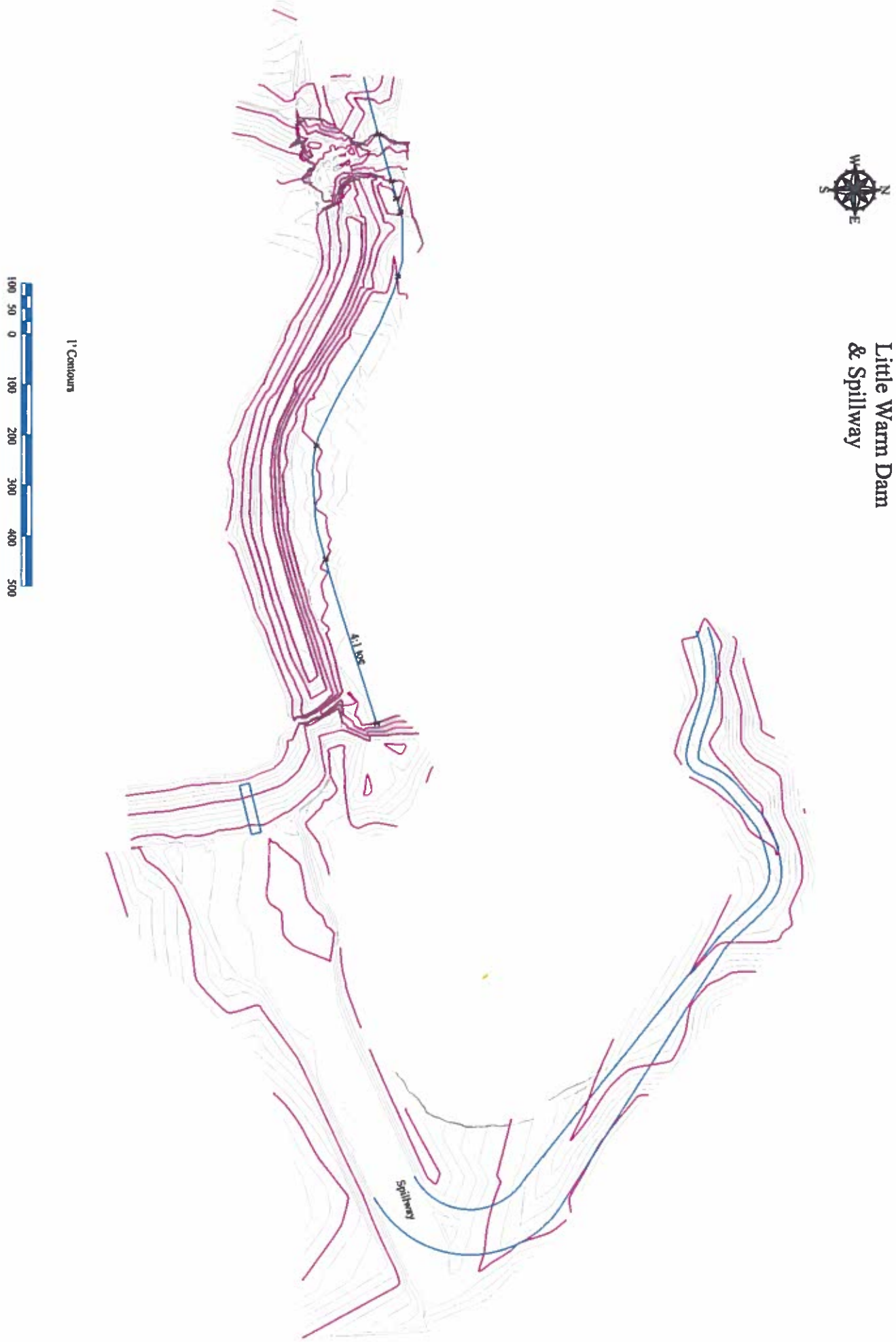
CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL	Secured? (Y/N)
Landowner (Little Big Warm Ranch LLC/Diamond Willow	$ 291,385.80	$ -	$ 291,385.80	Y
Ducks Unlimited	$ -	$ 20,000.00	$ 20,000.00	Y
U.S. Fish and Wildlife Service	$ -	$ 10,000.00	$ 10,000.00	Y
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTALS	$ 291,385.80	$ 30,000.00	$ 321,385.80	

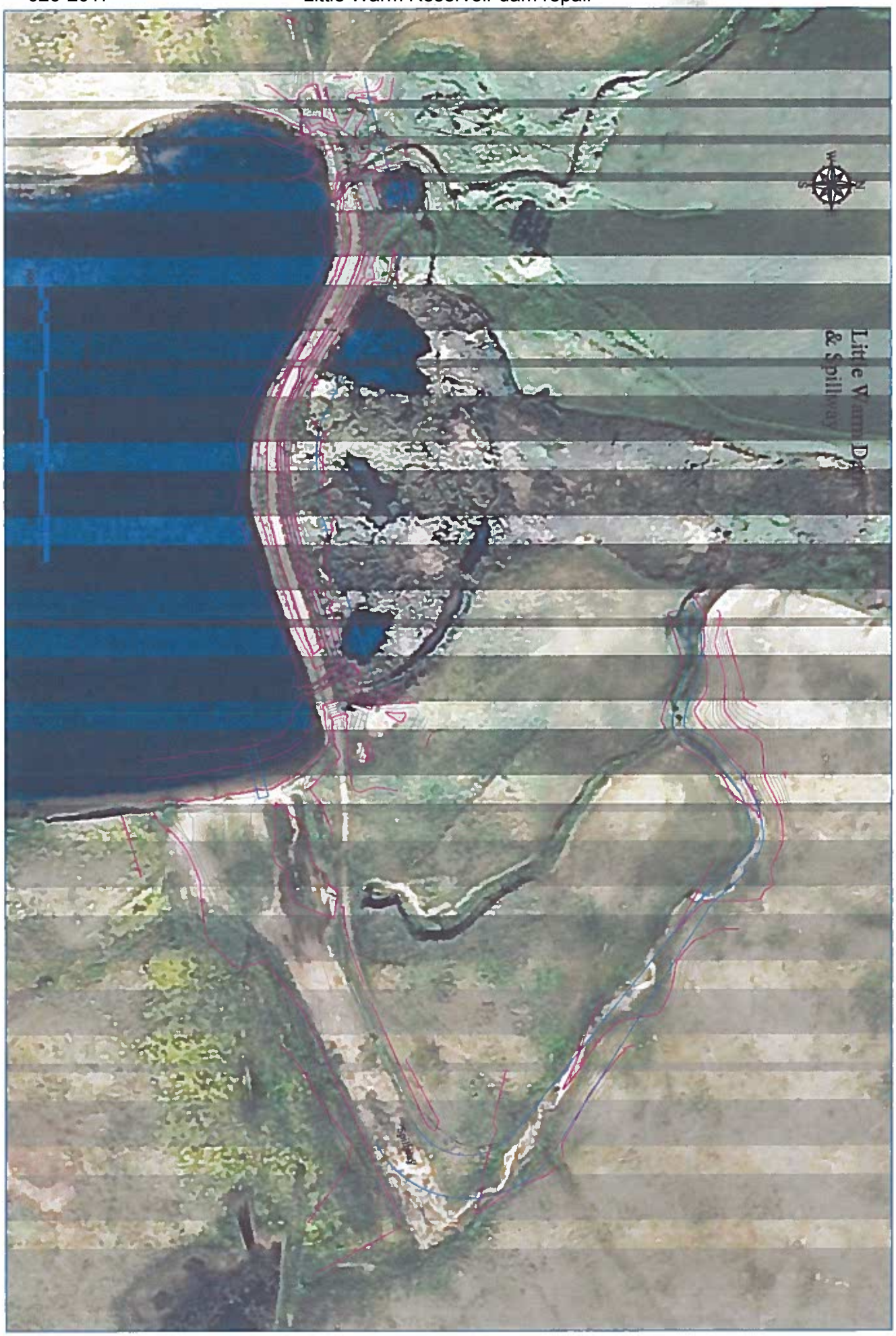

Schoolhouse
Coulee
White
Warm
Little
Creek
Phillips
Phillips
36
31
1
6
858
822
800
804
824
771
789

026-2017 Little Warm Reservoir dam repair



Pre Flood
Little Warm Reservoir
Google earth
1000 ft
N


Little Warm Dam
& Spillway
N
E
S
W
Spillway
1' Contours
100 50 0 100 200 300 400 500


Little Warm Dam
& Spillway

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
Water Resources Division - Havre Regional Office
STEVE BULLOCK, GOVERNOR
210 6th AVENUE
STATE OF MONTANA
PHONE (406) 265-5516
FAX: (406) 265-2225
PO BOX 1828
HAVRE, MONTANA 59501

April 24, 2017

Jay Mark French – Manager
Little Big Warm Ranch, LLC
13229 Alkali Road,
Malta, MT 59538

Dear Mr. French:

This letter is to provide the Department's determination of hazard classification for your dam. We determined Little Warm Dam and Reservoir to be *Not High Hazard.* This classification is not based on the condition of the dam. The classification is only a reflection of paved roads/structures in the downstream area that could possibly be inundated during a sunny weather dam failure.

Dams classified as *Not High Hazard* are not required to obtain dam safety permits for construction or operation. *Please note this classification is only a test for whether or not you need additional permits, not a statement that property damage or loss of life will not occur in the event of dam failure.* Also be aware the classification does not relieve the dam owner of the responsibility of observing proper care in the construction/operation of the dam. You are encouraged to consult with experienced professionals. More information on the responsibilities of dam ownership can be found on our website at http://dnrc.mt.gov/divisions/water/operations/dam-safety/dam-owners.

We maintain an inventory of all dams in the state. Following completion of the reconstruction, I would appreciate an email or phone call letting me know of any changes made to the dam. This will help us keep our inventory current.

Please call or email if you have any questions.

Sincerely,

Mike Mahowald

Mike Mahowald
Regional Engineer, Montana DNRC Havre Regional Office
(406) 265-5516
mmahowald@mt.gov

CC: Steve Story, P.E. Water Operations Bureau Chief
Michele Lemieux, P.E, Dam Safety Section Supervisor
Willie Doll

026-2017 Little Warm Reservoir dam repair

Mike - 210 6th Ave

Form 4315-1 R 8/07

APPLICATION FOR DETERMINATION OF HAZARD CLASSIFICATION OF DAMS AND RESERVOIRS

RECEIVED
MAR 1 2017
DNRC WATER RESOURCES
HAVRE REGIONAL OFFICE

INSTRUCTIONS

Use this form to apply for a determination of whether a dam or reservoir to be constructed, altered, repaired, enlarged, or removed is a high-hazard structure. The completed application, together with an inspection fee of $125.00, should be to the DNRC Regional Office listed on the back page. Attach a U.S. Geological Survey topographic map showing the location of the proposed or existing structure.

FOR DEPARTMENT USE ONLY

Date Application Rec'd _____
Rec'd by Mike Mahowald
Fee Rec'd $125.00
Check No. 9108
Transmittal No. HVS1723643
Refund _____
Date Completed Appl. Rec'd _____

Maximum normal reservoir capacity *(usually measured to the principal or emergency spillway crest)* 960 acre-feet
(If capacity is less than 50 acre-feet, this classification is not necessary.)

Maximum reservoir capacity *measured to the crest of the dam* _____ acre-feet

This application is for the Repair & Classification of the Little ~~Big~~ Warm Dam
(Construction, alteration, repair, enlargement, removal or reclassification) (Name of dam or reservoir)

The dam is in Phillips County NW ¼ Sec 29 Twp 27N Rge 28E

and is located on On Stream, a tributary to Little Warm Creek
(Creek or River) (Creek, River or Offstream) (Creek or River)

Owner Name Little Big Warm Ranch LLC

Address 13229 Alkali Road
(Street) (P.O. Box)

Malta MT 59538 x (406) 654-7484
(City) (State) (Zip Code) (Telephone)

Purpose(s) for which the dam is (to be) used Irrigation & Stock
(Irrigation, stock, municipal, etc.)

Maximum normal water depth *measured from the streambed to the crest of the principal or emergency spillway* _____ feet

Dam height *measured from the streambed to the crest of the dam* 20 feet

The applicant certifies that the statements appearing here are to the best of his/her knowledge true and correct.

x J. Mark Finch - manager x 3-1-17
Signature Date

Willie Doll x 3-1-17

A determination will be made within 60 calendar days of receipt of a complete application. Send completed application to: the DNRC Regional Office in your area. Phone numbers and locations can be found on the back page or go to the following URL: http://www.dnrc.mt.gov/field_operations/regionaloffices/Default.asp

FOR DEPARTMENT USE ONLY

Based upon the information above and the structures downstream of the dam, the dam's hazard potential is classified:

☐ *High Hazard** ☒ *not High Hazard**

Signed Michele Lemieux P.E. Date April 17th 2017

026-2017 Little Warm Reservoir dam repair

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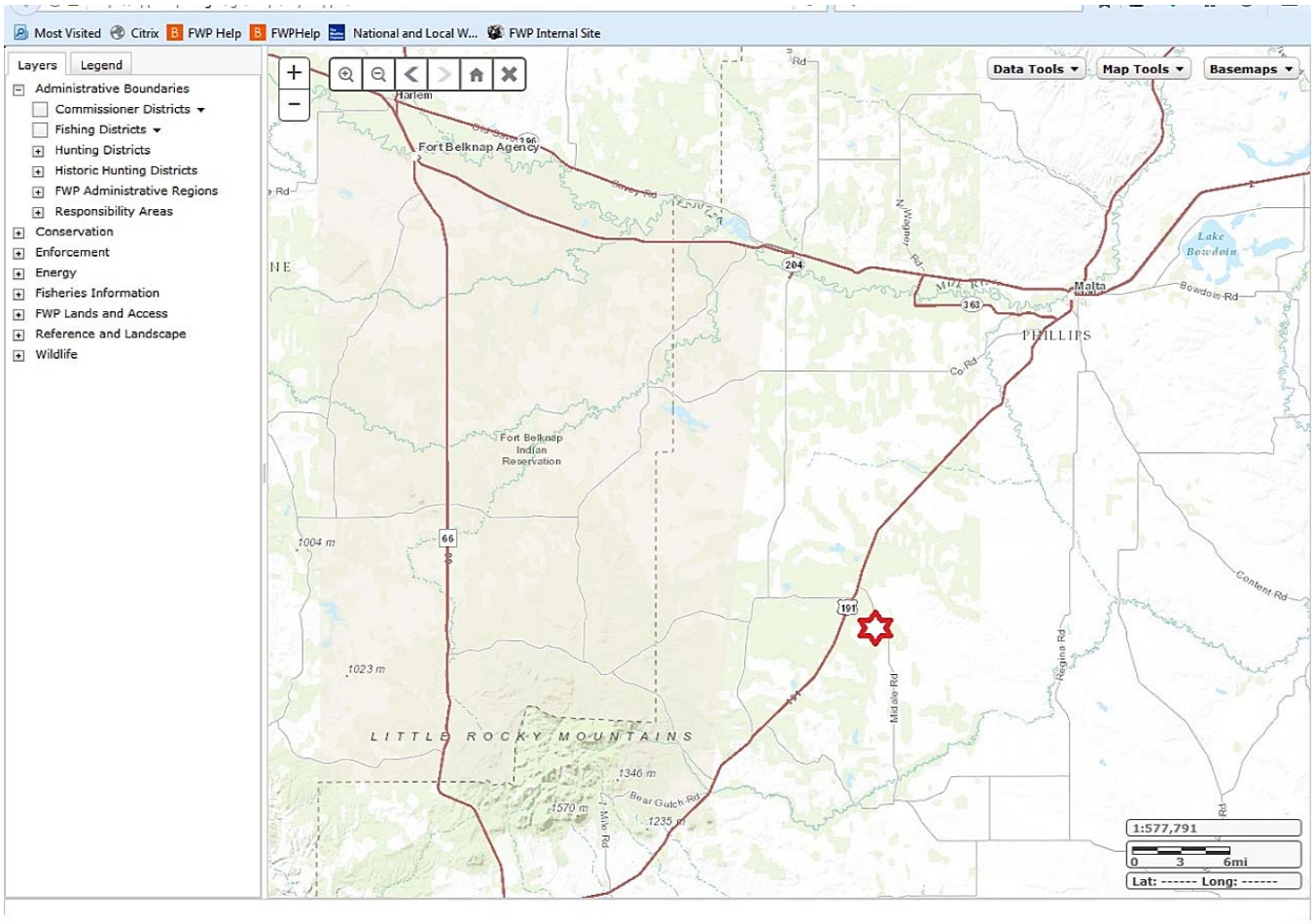
026-2017 Little Warm Reservoir dam repair