

**Boundary Creek Bullfrog
Workday Report: June 29, 2015**

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Introduction

Northern leopard frogs (*Lithobates pipiens*) have not been detected in the Idaho Panhandle since 1955 (IDFG, unpublished data). During the summers of 2013 and 2014 the Multi-species Baseline Initiative conducted surveys for pond breeding amphibians in 801 5x5km² survey cells in the Idaho Panhandle and adjoining Selkirk Mountains in Washington. The survey failed to detect native northern leopard frogs but did detect non-native American bullfrogs (*Rana catesbeiana*) in 25 survey cells, including near the Canadian border approximately 20km from the nearest known native northern Leopard frog colony at the Creston Wildlife Management Area (CWMA) (Lucid et al In Prep). Bullfrogs are currently not known to be extant in the CWMA (M-A. Beaucher personal comment). Bullfrogs establishing populations at the CWMA is of conservation concern because bullfrogs may pose a threat to native northern leopard frogs for reasons including predation, competition, and disease. The Boundary Creek Wildlife Management Area (BCWMA) abuts the Canadian border. Bullfrogs are extant on BCWMA. A better understanding of bullfrog distribution on BCWMA is necessary to assess potential control actions which may limit dispersal of bullfrogs to CWMA. On June 29, 2015 individuals representing British Columbia Ministry of Forests, Lands, and Natural Resource Operations, Central Kootenay Invasive Species Society (CKISS), CWMA, and Idaho Department of Fish and Game (IDFG) implemented a workday to conduct bullfrog surveys across the BCWMA and surrounding areas.

Methods

All participants completed a one hour amphibian identification training. We then split into teams and conducted daytime larval dip net surveys and night time auditory and spotlight surveys at ponds and ditches (n = 12). We recorded all amphibians observed while driving after dark. We recorded all herptile observations obtained. We attempted to capture all bullfrogs and euthanized captured bullfrogs with a blow to the head. We also shot bullfrogs with BB and pellet guns.



Bullfrogs were successfully removed with dipnets and BB guns.



Dipnetting was conducted from shore and boat.

Results

We found adult and juvenile bullfrogs at 4 (25%) of 12 pond/ditch surveys. We did not detect larval bullfrogs. We detected Sierran tree frogs (*Pseudacris sierras*), Columbian spotted frogs (*Rana luteiventris*), long-toed salamanders (*Ambystoma macrodactylum*) or western toads (*Anaxyrus boreas*), at 5 (42%) of ponds/ditches (Table 1, Figures 1-2). We did not detect amphibians at 6 (50%) ponds/ditches. Also at ponds/ditches we detected painted turtles (*Chrysemys picta*) at 2 (17%), common garter snakes (*Thamnophis sirtalis*) at 2 (17%), and terrestrial garter snakes (*Thamnophis elegans*) at 0. We did not detect northern leopard frogs. We detected 5 adult bullfrogs on Farm to Market Road while driving to wetland K (Bass Lake) (Table 2). We captured and euthanized 16 bullfrogs. We shot, and probably killed four bullfrogs, but were unable to recover their carcasses. In total we removed 20 adult or juvenile bullfrogs.



Captured bullfrogs were transported in buckets and coolers to euthanasia site.

Discussion

We did not detect larval bullfrogs during this survey. However, previous surveys have detected larval bullfrogs in the same study ponds (Lucid et al. In Prep). While bullfrogs do occur on the BCWMA and in surrounding wetlands we did not detect them farther north than Smith Creek and Bass Lake. Cooperative decision making between partnering organizations is necessary to determine if further work should be implemented, and might be effective, at mitigating the bullfrog threat to northern leopard frogs and other native amphibians.



Marc-Andre Beaucher (CWMA), Jen Haynes (CKISS), and Jim Derrig (IDFG) with bullfrog trophies.

Literature Cited

Lucid, M., L. Robinson, and S. Ehlers. In Prep. Multi-species Baseline Initiative Project Report.

Acknowledgements

We deeply appreciate Nancy Turley allowing us to conduct bullfrog surveys on her property.

ID	Type	Latitude	Longitude	BF	TF	LTS	CSF	WT	PT	CGS	TGS
A	Pond	48.9961	116.56242		1(NL)5(BL)	1(LEGS)					
B	Slough	48.96443	116.55086		2(NL)3(BL)1(LEGS)	1(LEGS)					
C	Pond	48.99821	116.55181								
D	Pond	48.99878	116.50961								
E	Pond	48.99338	116.55719								
F	Pond	48.97827	116.55221							1	
G	Ditch	48.96284	116.53878				6(AJ)				
H	Pond	48.95755	116.54854	13(AJ)	20(NL)1(LEGS)3(AJ)		5(AJ)				
I	Pond	48.98705	116.55011								
J	Pond	48.90379	116.38985	50(AJ)				1(AJ)	20	1	
K	Pond	48.96739	116.48082	3(AJ)					1		
L	Pond	48.96301	116.54411	50(AJ)							

Table 1. Waterways surveyed for bullfrogs and herptiles observed by age class, June 29, 2015.

Age class: NL=no legs, BL=beginning legs, LEGS=4 legs with tail, AJ=fully formed adult or juvenile
Species: BF=bull frog, TF=Sierran tree frog, LTS=long toed salamander, CSF=Columbian spotted frog,
WT=western toad, PT=painted turtle, CGS=common garter snake, TGS=terrestrial garter snake

ID	Latitude	Longitude	Species	Quantity
NA	48.91353	116.38436	BF (AJ)	1
NB	48.91353	116.38436	WT (AJ)	1
NC	48.9142	116.39491	BF (AJ)	2
ND	48.91594	116.39611	BF (AJ)	1
NE	48.92385	116.39703	BF (AJ)	1
NF	48.94902	116.43626	BF (AJ)	1

Table 2. Species (age class) of amphibians observed while driving at night on June 29, 2015.

AJ=Fully formed adult or juveniles, BF=bull frog, WT=western toad

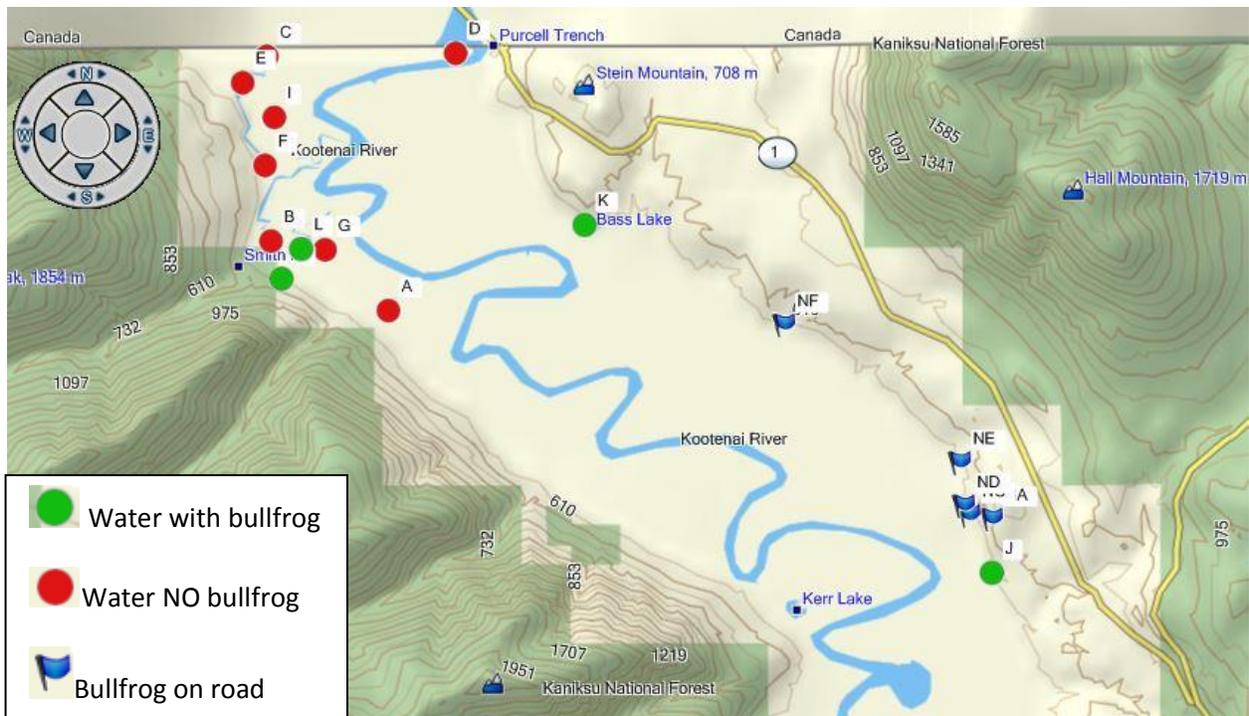


Figure 1. Locations of wetland surveys and bullfrog detections June 29, 2015.

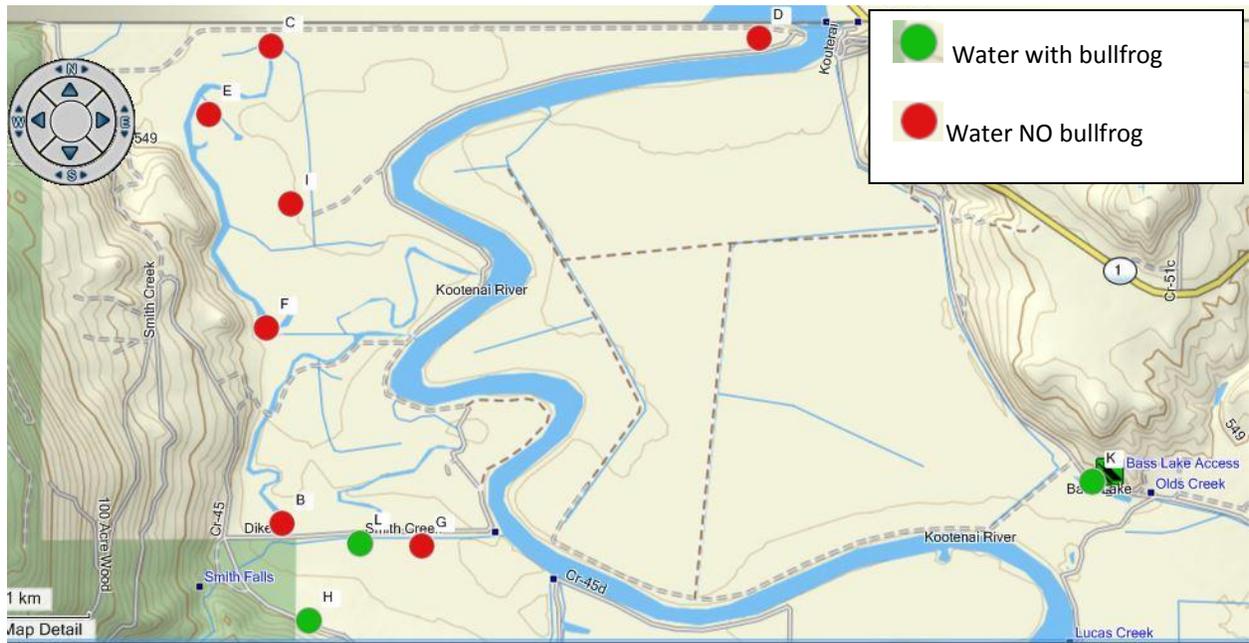


Figure 2. Wetland surveys and bullfrog detections north of wetland H June 29, 2015.