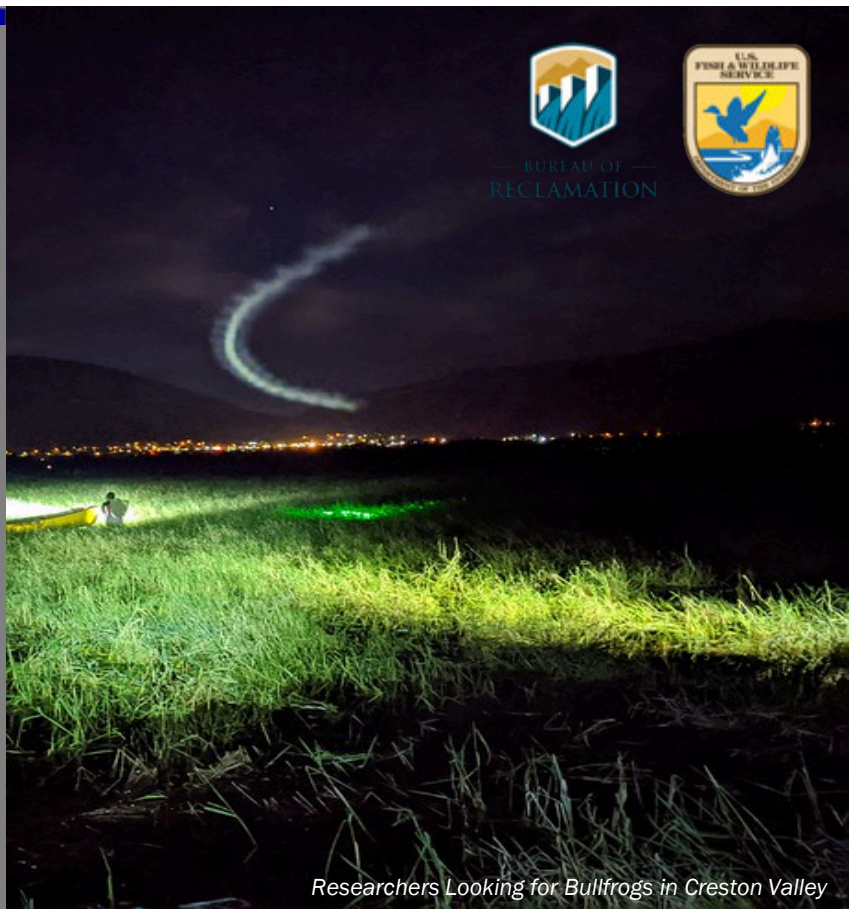


## RESTORATION

# Transboundary Bullfrog Control Along the Canada- U.S. Border



Northern leopard frogs (NLF; *Lithobates pipiens*), a recovery species within Canada's Species of Interest Action Plan and a species of conservation need in the U.S., were once abundant in the Kootenay River Valley. NLF have been extirpated from much of their native range due to the combined pressure of invasive bullfrogs, introduced disease, and habitat loss. Currently, one isolated NLF population remains, 15 km north of the Canada-U.S. border. In 2015, American bullfrogs (*Lithobates catesbeianus*) were detected in the Idaho Panhandle. Since then, through cross-border collaborations, the Ministry of Forests (FLNRORD), Idaho Department of Fish and Game (IDFG), and other partners have been conducting bullfrog control to prevent encroachment into NLF habitat.



Researchers Looking for Bullfrogs in Creston Valley

## KEY ISSUES ADDRESSED

Bullfrogs pose a substantial threat to native species, including the NLF– Rocky Mountain population across the Canada-U.S. border, via predation and reduction of habitat quality and quantity. Though bullfrog control efforts have been implemented in the Kootenay River Valley (Creston Valley and northern Idaho) since 2015, limited information regarding the distribution of native amphibians and bullfrogs in this complex water-body system made control efforts inefficient. Additionally, bullfrogs were established in the Idaho Panhandle across the Canada-U.S. border on public, private, and tribal lands. Therefore, a collaborative transboundary effort was necessary to prevent bullfrogs from reaching NLF habitat.

## PROJECT GOALS

- Map the distribution of amphibians in the Kootenay River Valley
- Protect NLF by preventing bullfrog incursion into Creston Valley
- Form and maintain collaborations across the Canada-U.S. border to control bullfrogs
- Inform the public through a targeted education program



## CONSERVATION CANINES

In 2020, dogs were successfully trained to detect bullfrogs where visual encounter surveys were not effective and to increase overall surveillance capacity of the program.

*Bullfrogs Captured From Idaho in 2019*

### PROJECT HIGHLIGHTS

**Bullfrog Removal:** As of March 2021, biologists removed 2,121 bullfrogs from Creston Valley using a combination of mechanical removal and shooting. Most captures occurred in 2019, with 1,464 bullfrogs captured and euthanized, including 651 bullfrogs from the Idaho Panhandle.

**Signs of Success:** In 2020, only 170 bullfrogs and one egg mass were removed from Creston Valley, even though funding and personnel increased from 2019. This decline indicates progress in bullfrog reduction.

**Collaborative Relationships:** In 2019, agencies and organizations working towards bullfrog eradication established a Transboundary Funding Agreement.

**Education and Outreach:** Central Kootenay Invasive Species Society (CKISS) delivered an education and outreach program on bullfrog awareness through “Don’t Let it Loose” (DLIL) messaging. The program reached over 43,500 people at 45 events in 2019. The FLNRORD Bullfrog Program coordinator also delivered outreach programming via public presentations and media interviews.

### Collaborators

- Central Kootenay Invasive Species Society
- Ministry of Forests, Lands, Natural Resource Operations and Rural Development
- See online for additional collaborators

CCAST Author: Krystie Miner, University of Arizona, August 2021.  
Photos courtesy of Matt Morrison/FLNRORD  
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### LESSONS LEARNED

To eradicate bullfrogs, it is critical to understand their ecology, distribution, and movement. Observations in 2018 indicated that the distribution of bullfrogs in Creston Valley was far greater than anticipated, and there was not enough crew to cover each site at the same time when capture conditions were ideal.

Continued monitoring of bullfrog populations is therefore imperative to this project. Successful initial eradication efforts could ultimately fail if biologists do not take action to prevent bullfrogs from replenishing the habitats they once occupied.

Maintaining and building partnerships is crucial when managing bullfrogs, especially along a multi-national waterway with diverse land ownership. Having the transboundary agreement laid the groundwork for successful cross-border collaboration between partners in Idaho and BC.

Funding from federal and regional entities for bullfrog removal was attained due to the tie to the NLF–Rocky Mountain population. Their at-risk status makes bullfrog removal a high-priority project.

### NEXT STEPS

- Employ radio telemetry/GPS tags to track bullfrog movements
- Build new and maintain existing partnerships with agencies and organizations that have the shared goal of bullfrog control
- Maintain survey and control efforts at known bullfrog locations and in connected habitats
- Secure additional, reliable funding to provide maintained field crew capacity

For more information on this project, contact Matt Morrison:  
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*A Juvenile Bullfrog Sits on a Lily Pad in Lomond Lake, BC*