Northern Leopard Frog and American Bullfrog Working Group
Meeting Minutes

December 7, 2020
Phone (Hosted by Adaptation Environmental Services)

Attendees	
Joe Ehrenberger	
Ryan Prioreschi	Boulder Open Space and Mountain Parks
Michelle Christman	U.S. Fish and Wildlife Service
Andrew DuBois	Jefferson County Open Space
Mac Kobza	Boulder County Parks and Open Spaces
Boyd Wright	Colorado Parks and Wildlife
Chelsea Beebe	Jefferson County Open Spaces
Will Keeley	City of Boulder Open Space and Mountain Parks
Aran Meyer	City of Fort Collins Natural Areas Program
Lauren Livo	Private Citizen Scientist; CO Amphibian (and reptile) expert

Goal: To bring together experts along the Front Range to discuss efforts to improve habitat for native wildlife, including northern leopard frogs, manage bullfrogs and to create a framework for future discussions.

Website:
https://www.adaptationenvironmental.com/401/login.php?redirect=/northern-leopard-frog-and-bullfrog-control-working-group.html
Password: Frogs2019

****ATTACHMENTS****

- **CCAST Description (and see note below…register for CCAST bullfrog workshop)**

- **eDNA study DRAFT proposal –** want to suggest changes? Contact Boyd Wright (CPW)

Potentially Helpful Information:

Collaborative Conservation and Adaptation Strategy Toolbox (CCAST) - https://usbr.maps.arcgis.com/apps/Cascade/index.html?appid=01245fcb9dec43938996e18b53f0f142

Recent meeting notes:

Please contact Matt Grabau (matthew_grabau@fws.gov); and see additional attachment for CCAST

Summary Notes:

We discussed a revised Treatment Catalog and are now seeking additional CoP input to begin populating a spreadsheet. If you would like to participate in a trial run of the Treatment Catalog, you are welcome to take a stab at adding project details in the Treatment Catalog here (via Sharepoint), or we can set up a call to discuss this over the phone. We thank you in advance for your input!

In addition, we discussed an upcoming CoP Workshop Series this winter to develop syntheses for Bullfrogs and Green Sunfish. Here is an outline for our Workshop plan (Mid-January to Mid-February), each topic as a separate Zoom call:

- Impacts, management challenges, and opportunities
- Human dimensions
- Control techniques (what are the best treatment/control options)
- Emerging research priorities

To sign up for this Workshop series **please fill out the Doodle Polls below by Friday December 11th**. Note, these calls are not just for CoP folks, so feel free to pass this information along to additional contacts or colleagues who are interested in contributing.

- Green Sunfish: https://doodle.com/poll/8wf3gw38dghescvm?utm_source=poll&utm_medium=link
- American Bullfrogs: https://doodle.com/poll/fr8ws4qu8r6pyvvm

We also have four new non-native aquatic Case Studies now available on CCAST!

- Ash Creek Sunfish Removal
- Bullhead Removal in CA
- Non-Native Trout in Whitewater Creek
- Bullfrog Eradication in Yosemite

Agency NOTES

OSMP – no new updates since our last minutes;

JCOS – wrapped up monitoring; 3 extant populations, planning surveys/ work for next year including areas identified by CNHP decades ago; Look for NLFs in Coal Creek areas; Working towards management protocols to help regularly monitor areas; Working towards restoration in areas with previous breeding ponds and/ or in poor shape with cattail encroachment (similar techniques as with OSMP); restoration of area at South Valley Park (near Chatfield); contract restoration over a couple of years; work towards defining look of areas that need restored to help communicate management/ restoration into the future
Boulder Parks and Open Space – completing species conservation recovery/ restoration plan for NLFs (internal doc to help guide agency) to be used for guidance on land-use
City of Fort Collins Natural Areas – Soapstone/ Meadow Springs monitoring effort (using OSMP protocol) and detected frogs at Meadow Springs (Soapstone observation in 2019); use ArcCollector to map overwintering/ breeding/ feeding/ movement corridors; writing and update to Soapstone management plan for NLFs; Dealing with unmanaged cattle access and hoping data will help guide exclusions; Bd testing and genetic sampling courtesy of CPW (B Wright)
CPW (B Wright) – samples to Pisces Molecular for tissue and Bd samples from JCOS and City of Fort Collins; data query for NLFs from various sources but data needs to be cleaned-up so data can be shared publicly with this group

Discussion:

1. **Maps and information:** LAUREN –
    a. Specific source data from maps are unable to be shared, but please contact Lauren if you have questions;
    b. Form shared was used for Boreal Toad Recovery Team and CNHP still uses this.
        i. Unclear who else still uses this form
            1. MC – forms looks very similar to form used for Chiricahua Leopard Frogs; form streamlined by AZ and USFWS (MC will share to be added to website; both a long and short form); pH data had not been standardized and therefore not as usable as hoped
2. **2021 eDNA sampling (Boulder OSMP and JCOS):** WILL/BOYD –
    a. attempt to re-purpose funding from Boreal Toad project (SCT fund) for eDNA and visual surveys – now: a regional study status assessment with those funds using eDNA and call-monitoring devices,
    b. H Crockett is pitching the project this week; proposal shared with the group, but must maintain original scope (Doc to be shared with Minutes)
    c. AD: Are you using eDNA in riparian, lotic or lenthic areas? (or both?) – BW wants to understand detection probability and covariates to be considered. I.e. hope is to collect water sample and get reliable results. There is hope that

this could work better with frogs than it did with toads, but need to understand the system.

d. WK: S Jermaine (JCOS NR Supervisor) may be a valuable resource moving into the future
e. MC: Other eDNA work that's been done shows better collection with moving water rather than ponds

3. **Moving forward in 2021:** MICHELLE –
    a. How can this group meet collaborators' needs?
        i. Are there resources elsewhere that may be used?
            1. AD: see notes below (5. JCOS)
    b. Do you all have a Google Drive or something similar to share resources and documents? If so, can I be added to it? and if not, would there be interest? (I'd be happy to set up a new one for the group)
    c. From the last call, I heard that people are using similar survey techniques, but there might not be a standardized protocol/s or standardized data sheets. Seems like this could be a good topic to discuss on the next call (is there a need for this, if so, how to collate existing protocols and data forms to a single standard).
    d. I recall from the last COPARC meeting that Lauren had species specific range maps, and was wondering if Lauren, or others, had maps for NLF and bullfrogs (historical range (NLF), currently occupied / breeding sites, unoccupied but surveyed areas vs. unsurveyed areas)? Seems like a visual of where frogs once were, where we currently know them to be extant, unoccupied sites, and unsurveyed areas would help get a bigger picture of status, threats, and conservation needs; and could be another good topic for discussion? (and if these types of maps exist, then, discuss, what are the next "priorities" in terms of surveys, conservation actions, or individual partner needs?)
4. **SWPARC/COPARC Virtual Meeting (Feb 12 and 13)**
    a. Meeting starts Friday afternoon via Zoom and will include Invasive Species session
5. **JCOS:** ANDREW –
    a. Here are some ideas/comments I'd like to share regarding moving forward as a group:
        - Due to NLF metapopulation dynamics, a regional or landscape-level approach is generally warranted for any conservation attempt targeting this species.
        - Heritage program model for northern leopard frog population tracking. Transform point observations into polygons that show actual occupied area as the element occurrence (EO). Track breeding wetlands, overwintering sites, and possibly movement corridors, aquatic refugia during drought, and foraging areas, as sub-EOs.
        - Each NLF element occurrence should include an assessment of threats/barriers, management considerations/needs, and include a list of

landowners/land managers across which the population occurs. Sub-EOs should be evaluated regularly and maintained at a certain ideal state/threshold to support the species (e.g. tracking cattail encroachment, presence of native emergent vegetation, presence of bullfrogs, succession of woody vegetation)

- Surveys should (1) seek to clarify occupied area of a given leopard frog population to ensure the EO actually reflects the population's occupied area and (2) monitor important sub-EOs, such as breeding wetlands, to monitor breeding attempts, recruitment, water quality, habitat suitability, etc.
- Inter-agency partnerships should be formed to manage/conserve populations that cross jurisdictional boundaries and follow the same general model state-wide.
- A central database where geographic data on leopard frog occurrence/status/etc would be helpful in coordinating attention to survey/restoration needs.

b. CB – When and how to involve others (agencies and partners from the area)?
    i. JE – Originally started to keep the discussion simple
    ii. MC – More people help the group to get more done; Agencies to collaborate via "adopt-a-site" programs to counter bullfrog expansion and tackle other important projects
    iii. BW – CPW is interested in helping with the goals of the group and management statewide; Hoping his role in CPW is playing a role towards these efforts; Good to have a pulse on what's going on with NLF conservation in the region
        1. How do we best organize/ centralize our information moving forward?
    iv. MK – backlog of work due to COVID; maybe mid-year for more work at that absolute earliest; Wants to wrap this group into native fish project with St. Vrain Valley School District to do more NLF monitoring – use this group to help with logistics; but MK does not have much bandwidth to do more
    v. WK – helps to partner when sharing boundaries to get "easy wins" to show benefits of coordination, may better happen after COVID allows for groups of more than two to work together;
        1. MK – need a conceptual model of where collaboration opportunities are