

Northern Leopard Frog and American Bullfrog Working Group  
Meeting Minutes

February 26, 2020  
Phone (Hosted by Boulder OSMP)

<b>Attendees</b>	
Harry Crockett	Colorado Parks and Wildlife
Boyd Wright	Colorado Parks and Wildlife
Elizabeth Brown	Colorado Parks and Wildlife
Andrew DuBois	Jefferson County Open Space
Michelle Christman	USFWS, PARC
Will Keeley	City of Boulder, Open Space and Mountain Parks
Ryan Prioreshi	City of Boulder, Open Space and Mountain Parks
Jonathon Decoste	City of Boulder, Parks and Recreation
Mac Kobza	Boulder County, Parks and Open Space
Kelly Triece	Adaptation Environmental Services
Joseph Ehrenberger	Adaptation Environmental Services
Lauren Livo	Independent researcher
Scott Severs	City of Longmont

**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

**Notes from each agency**

**JCOS (A DuBois)**

**Status of NLF**

- NLF have been found at 14 sites (12.8%), breeding has been detected at 6 sites (5.5%)
  - Reproduction of NLF found at 5 sites (4.5% of total wetlands) in 2019.
  - Historic park-level distribution of northern leopard frog on JCOS: Crown Hill Park, Pine Valley Ranch Park, South Valley Park, Hildebrand Ranch Park, Coal Creek Study Area (REH), Lippincott\* (6 parcels)
  - NLF have been extirpated from Crown Hill Park (last records mid 1990s) and may possibly be extirpated from SVP (last record 2018); the HRP populations appears to have seriously declined since 2013 and may be well on its way to extirpation
- **Status of Bullfrogs**
  - Bullfrogs have been found at 10 sites (9.1% of total wetlands) within JCOS system
  - Historic park-level distribution of bullfrogs on JCOS: Crown Hill Park, Hildebrand Ranch Park, North Table Mountain Park, South Valley Park, Van Bibber Park
  - Bullfrogs and northern leopard frogs have occupied 3 of the same wetlands historically, and 2 sites currently
- **Current Actions**
  - Streamline data collection using Survey123
  - Census of JCOS wetlands = 109, but we find additional wetlands each year - staff surveyed 49 wetlands for pond-breeding amphibians last year
  - Repaired HRP\_1 wetland last fall - it has not been able to hold water the last 2 yrs
  - Processing frog calls in Kaleidoscope from SM2 (x3) and SM4 (x2) units
  - Continuing FrogWatch USA monitoring program
- **Planned actions**
  - Request CPW records, Herpmapper, iNaturalist records of NLF and bullfrogs
  - Acquire pellet gun, a la CB OSMP, to control bullfrogs at HRP
  - Cattail removal/restoration at South Valley Park at former NLF breeding pond (SVP\_1)
  - Open discussion with South Suburban Park District and Denver Botanic Gardens about bullfrog/leopard frog metapopulations (both species occur at neighboring properties to HRP)
  - Acquire additional song meter units to cover known NLF breeding sites and to cover potential breeding sites near existing areas
  - Map all JCOS wetlands with ArcCollector
  - Survey remaining 60 known wetlands on JCOS property
  - Continue monitoring NLF confirmed and suspected wetlands using song meters
- **Potential actions in the future**
  - Vegetation and wetland restoration of Crown Hill Park and Van Bibber Park, head-start NLF
  - Discussing possibility of installing a beaver dam analog at HRP\_7, a former beaver pond destroyed in the 2013 floods that once supported a healthy NLF breeding population

### **OSMP (W Keeley)**

- Restored 6 sites in 2019, early snow prevented more work from being done, but it's more work than they usually get done.
  - Tend to get more work done in the fall.
- Used Restoration and Trails staff at OSMP to help with the restoration projects and as team building
- Likely will do 5-7 additional restoration sites this year in addition to their monitoring
- If anyone is interested in seeing what some of our NLF/breeding/restoration sites look like let Will or Ryan Priorecshi know. They would be happy to find a time to show people around after the snow melts.

### **BCPOS (M Kobza)**

- Monitored 40 sites, no detections of NLF
- Electro-frogged at a stock pond and removed 50 frogs, tried using the electro-frogger from a boat at Peschel but it didn't work. City drained the pond to help it freeze over attempting to kill the bullfrogs.

[W Keeley – Why didn't boat work? MK – limited experience so far, more practice needed; SS – pond too shallow for effective use of boat (too shaky)]

- Jordan from BCPOS visited OSMP during restoration projects and created an NLF restoration plan, as well as an SOP for using the electro-frogger.
- 2020 Mac is establishing a plan for bullfrog control and leopard frog monitoring,
  - 1 NLF restoration project - they'll try to focus restoration work on Big Bird Stock Pond.
  - Goals for this year = get a detection of a NLF on BCPOS this year.
  - Create one area of strength, then recover additional areas - likely won't survey 40 sites this year.
- Detected bullfrogs at Rock Creek Farm.
- Want to use the Electro-frogger at other sites with other partners.
- For 2021, what restoration projects should be done beyond the 1 restoration project being done in 2020?
- Mac is still donating bullfrog corpses to a school to be used for dissections, and Mac is willing to funnel frog corpses through him to the school
  - he'll send a bucket to put the frogs in.

### **City of Longmont (S Severs)**

- Attempted electro-frogger from a boat at Peschel but it didn't work.
  - City drained the pond to help it freeze over attempting to kill the bullfrogs.
  - Hunter Johnson (CSU student/ COPARC) helped with inventory and monitoring.
- They're doing cattail control and additional monitoring efforts for NLF this year.
- 2020 - Scott's first year to do dedicated herp surveys throughout the system.
  - Will also be doing water quality monitoring and call survey monitoring.

[SS *Is there a standard for NLF habitat?*]

- AD – connectivity needed (i.e. breeding wetland (ephemeral w/ low, emergent vegetation) to upland habitats for hunting to deeper water for over-wintering
- RP – OSMP NLFs are using cattle stock ponds that maintain permanent water
- WK – OSMP happy to take folks around on a tour of NLF sites
- LL – NLF egg deposition sites favor 10cm deep sites, attach eggs to vegetation, dislike very steep banks, prefer sunny areas
- HC - CPW wetlands grant program provides fact sheets and species-specific "habitat score cards" for estimating the likely benefits of wetland creation or improvement.
  - o The pdf is on the Working Group Website

### **City of Boulder Parks and Recreation (J. Decoste)**

- Jon assisted OSMP in cattail removal (Oct)
- 12 sites for monitoring

### **CPW – State Parks (J Thompson; via Adaptation Environmental, J Ehrenberger/ K Triage)**

- Detected NLF via Song Meter at Crescent Meadows in Eldorado Canyon State Park
- Did not detect Castlewood Canyon, Cherry Creek, and Chatfield NLFs via song meters.
- Investigating software issues with Kaleidoscope Pro and may utilize Arbimon software per recommendations from WY Game and Fish.
- Herp surveys at Fisher’s Peak State Park (new and near Trinidad) in 2020; will deploy Song Meters and search for NLFs.

### **CPW (H Crockett, B Wright)**

- Improved usefulness of HERP database - Boyd has new data, but much of what’s in CPW database is old.
- Boyd will do some work acquiring CPW records with people.
- Did pilot eDNA study with Pisces molecular with Will and Ryan at OSMP.
  - o Collected 6 tadpoles to test the published primer from Canada, collected 23 eDNA filtered water samples from known breeding sites with confirmed breeding activity.
  - o eDNA primer that worked for NLF in Canada didn’t match up with Colorado leopard frogs - they were able to analyze CO samples and show positive results for all but 1 sample, but the workaround they were doing was a lot of extra work and not efficient.
- Boyd will fund Pisces to develop a more specific tool for local eDNA work.
  - o Boyd will try reaching out to other partners for additional genetic samples.

[NOTE: M Christman added that there was an east/western split between NLF genetics and maybe that could be contributing to the confounding of the eDNA primers. Boyd has already reached out to Andy Gygli about his eDNA work but those folks haven’t wanted to share much info from them; possible that these university folks don’t want to help as much because Boyd is working with a private lab. Do tail clips of tadpoles and store them in 80% ethanol; they’re using mtDNA.

M Christman mentioned that Karen Mock at USU is researching Northern Leopard Frog genetics. The paper from this work (O'Donnell and Mock 2012) is on the Working Group Website. Boyd says "It is an interesting read if you haven't already read it and provides some potential insight into why we have had issues using the primer developed from frogs in Ontario on our front range NLFs. It looks like the delineation for the eastern and western haplotypes cuts somewhere down the middle of Ontario, but Beauclerc et al. (2018; also attached) did not report where in Ontario their tissue samples came from, nor did they cite the work O'Donnell and Mock (2012), which was a considerable oversight and flaw with the primer in my opinion."]

- Aran Meyer with **City of Ft Collins** is interested in doing some NLF translocations
  - Boyd is going to do some pathogen sampling to make sure they're not moving around Bd.
- Lots of work on I-25 S of Castlewood Canyon;
  - CPW commented on GAP survey;
  - NLF were found widespread from Monument to Castle Rock throughout Plum Creek.
  - Found at each site where they look for them; lots of bullfrogs as well.
  - Douglas county has leopard frogs, Boyd isn't sure if they do proactive herp work but we may be able to engage them in our working group.

#### **L Livo, Private researcher**

- Plum Creek, 15-20 yrs ago Jen Logan was finding NLF and bullfrogs in the same area and occupying the same ponds. Interesting case of long-term co-habitation.
- Reiterates re-occupation of Boulder sites following restoration is very encouraging

#### **M Christman, PARC federal coordinator**

- Formerly NM species lead for Chiricahua leopard frogs for 15 yrs, also did some work with NLF in NM.
- Has experience with leopard frog translocations, captive programs, and data management.
- Wants to be a resource to help us coordinate work.

#### **SWPARC Meeting in Ft Collins this October,**

- Goal of meeting to discuss invasive species impacts on herps. Crayfish, bullfrogs, Red-eared Sliders, northern watersnakes, etc.
- Input welcome; contact J Ehrenberger
- More info to come!

#### **CPW Wetlands Grant**

- Boyd still willing to help with this.
- Need to have CPW sponsor, and Boyd would be happy to fill this role for projects that would directly benefit NLF

#### **Follow up email from B Wright about the data request:**

"After some discussion with our database manager (Andrew Treble) regarding our data request, we decided that because this group involves a consortium of individuals and entities outside of CPW,

we would need to submit a formal data request. I have attached the completed data request form for your review. Of particular note, through my discussion with Andy I learned that at least one of the CitSci platforms that has contributed data has put limitations on the level of resolution for which it can be reported out. Further, in accordance with state statute we are not allowed to publicly provide point data that was collected on private lands, though we can report these observations at the HUC 12 level. I am hopeful that every observation will either be reported as point data or HUC 12, accordingly. Finally, in the last box on the request form I listed additional fields we want linked to each observation (if available). **Take a look at those and please let me know if there is anything else you think should be included that is not already.**

I also learned that he had just received the final CitSci data dump (NA Herps), so the database is near complete. Our little request will provide the impetus needed to finish all updates to the CPW Herp Database. That said, it may be a few weeks or more after the request is submitted that we will have anything, but I will do what I can to keep the ball rolling.”