

STATE WILDLIFE GRANT

**State of Illinois
Department of Natural Resources**

Final Performance Report

PROJECT TITLE: Habitat Conservation Initiative for the Illinois Chorus Frog (*Pseudacris streckeri illinoensis*): Phase I

PROJECT NUMBER: T-62-D
GRANT AWARD NUMBER: F09AF00061

PROJECT MANAGER: Stan McTaggart (for Bob Bluett, retired)

ADDRESS: One Natural Resources Way, Springfield, IL 62702

PHONE NUMBER: (217)558-6623 Email: stan.mctaggart@illinois.gov

DATE REPORTED: January 29, 2019

PROJECT DURATION: September 1, 2009 – August 31, 2018

Illinois Chorus Frog (*Pseudacris streckeri illinoensis*)



Photo credit: Michael Jeffords

Performance reports must contain: 1) A comparison of actual accomplishments with the goals and objectives of the award as detailed in the approved scope of work; 2) A description of reasons why established goals were not met, if appropriate; and 3) Any other pertinent information relevant to the project results. Cost figures in the performance reports are not subject to audit and may not reflect certified costs identified in the SF-425. Include the grant award number in all performance reports submitted.

Executive Summary

The Illinois Chorus Frog is a state threatened species that is undergoing a status review by the US Fish and Wildlife Service. Within the state, the range for the Illinois Chorus Frog is restricted to sandy soils in and around ephemeral wetlands in the Illinois and Mississippi River Sands Areas as shown in Figure 1 (INHS 2017). It has a unique life history that makes research difficult due to spending up to 85% of its life underground, emerging briefly in the early spring to breed. The primary threat to this species is loss of habitat, due mainly to changes in hydrology caused by agriculture and/or development (INHS 2017).

This project meshed very nicely with the 3 primary actions to benefit Species in Greatest Need Conservation (SGNC) according to a survey of Illinois' herpetologists by Dreslik (2015 taken after the project was well underway!). The three things identified the most by herpetologists to benefit SGNC were: 1) population monitoring 2) habitat restoration and 3) land acquisition. Even though this project did not acquire land, it did protect almost 200 acres for 10 – 15 years through the Conservation Reserve Program and if/when funding for acquisition is secured, much work has been done to determine priority areas.

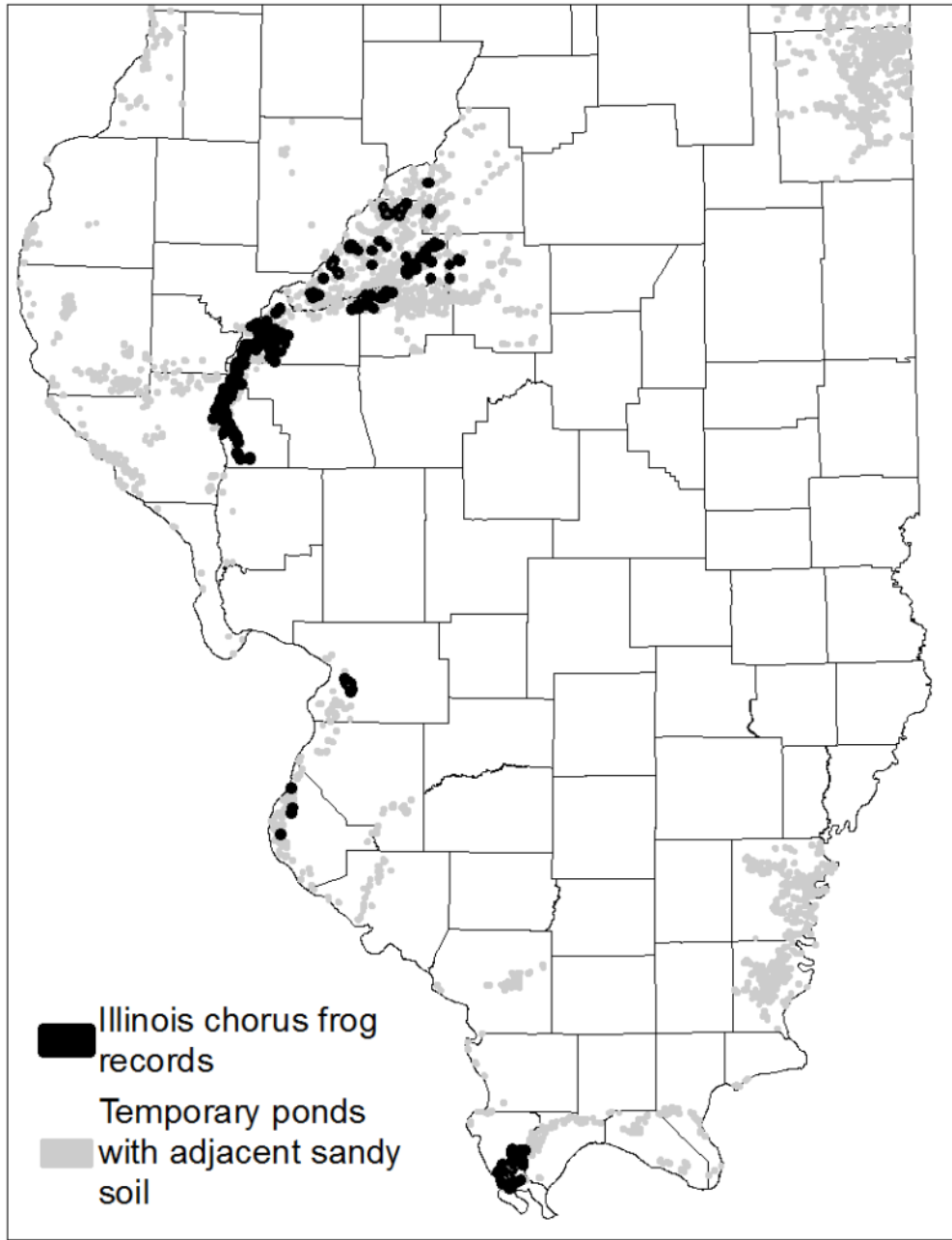
This grant helped to create, improve and protect habitat in key areas for the Illinois Chorus Frog and other associated SGNC. Surveys to identify new populations were conducted and monitoring efforts for this species were formalized. Some private land with potential for high-quality habitat was identified in previous habitat suitability analyses by Hulin et al (2015) and was taken out of agricultural production (enrolled into CRP) and improved. Other sites were treated for woody encroachment and/or managed to improve habitat quality in and around the wetlands. New wetlands were also created in historic locations using liners and repairing/replacing old well pumps to provide water for the chorus frog breeding season during droughts.

The project offered a sign-up incentive payment to private landowners with areas of suitable habitat and resulted in the protection and enhancement of over 198 acres in and around 22 wetlands in Mason County. The United States Department of Agriculture was a partner using the Conservation Reserve Program (CRP) to take these areas of potential (and former) habitat out of row-crop production during the contract. This partnership was effective to bring willing private landowners to the table to protect and restore prior converted wetlands in Mason County.

A long-term monitoring plan was developed based on preliminary surveys (2011 – 2014) and provides empirical data to meet federal standards for surveys and investigations (Cosentino 2014). This plan recommended calling surveys be conducted twice during the breeding season (three times during drought years). The project also evaluated occupancy and recruitment of both natural and man-made wetlands for Illinois chorus frogs as well as other species of reptiles and

amphibians. Overall, the project improved critical wetland habitat, created ephemeral wetlands in key areas and expanded understanding of chorus frogs in Illinois.

Figure 1. Map of Illinois Chorus Frog locations and potential habitat, INHS 2017



Significant Developments:

There were challenges during the project due to a fiscal shutdown in Illinois that left the state and Department of Natural Resources without a Capitol Budget for almost 3 years. Cooperators,

contractors and researchers all felt the strain as bills were not paid in a timely manner and work was postponed indefinitely. However, most of the work was still completed.

Project Objectives

1. Control woody and exotic vegetation on ~50 acres at Clear Creek Wetland SNA.
2. Establish native grasses and forbs on ~10 acres at Clear Creek Wetland SNA.
3. Rehabilitate two wetlands at Clear Creek Wetland SNA by removing standing dead trees and organic material on ~5 acres.
4. Create two small (~50x100 ft), shallow ponds, one in Field 19 and one near the headquarters of Sand Ridge State Forest.
5. Repair/maintain well pumps supplying water to shallow ponds at Field 19 and headquarters of Sand Ridge State Forest.
6. Repair/replace a well pump at the Rollo Tract of Sand Ridge State Forest to restore water management capabilities at a shallow pond and ephemeral wetland.
7. Create five small (~50X100 ft), shallow ponds at Rollo Tract of Sand Ridge State Forest.
8. Control woody/invasive vegetation on ~42 acres at Rollo Tract of Sand Ridge State Forest.
9. Establish native grasses on ~40 acres at Rollo Tract of Sand Ridge State Forest.
10. Create 3 small (~50X100 ft), shallow ponds at Sparks Pond SNA.
11. Control woody/invasive vegetation on 47 acres at Sparks Pond SNA.
12. Enhance and/or protect ≥ 30 farmed or prior converted wetlands (198.8 acres including upland buffers) on private lands in Mason County.
13. Monitor the presence of Illinois Chorus Frogs at improved/protected sites in Mason County and at reference (unimproved) sites in Mason and Menard counties.
14. Develop a long-term monitoring plan that meets federal standards for surveys and investigations (522 FW 12).
15. Evaluate amphibian use of ponds/wetlands constructed as breeding habitat for the Illinois Chorus Frog in Mason, Tazewell, Cass and Menard counties.
16. Prepare and submit five annual and one final reports of progress.

Objectives and Accomplishments by Job

Job 1. Habitat restoration at Clear Creek Wetland State Natural Area

Three objectives for this job were set in the grant:

- ✓ Control woody and exotic invasive plants on ~50 acres at Clear Creek Wetland SNA.
- ✓ Establish native grasses and forbs on ~10 acres at Clear Creek Wetland SNA.
- ❖ *Rehabilitate two wetlands at Clear Creek Wetland SNA by removing standing dead trees and organic material on ~5 acres.*

The first and second objectives were met. Fifty acres at Clear Creek Wetland SNA were treated with herbicide to control woody and invasive plants such as wild cherry and maple. A 10-acre parcel was treated mechanically (mowed) because the density of woody plants was too great to treat effectively with herbicides. A follow-up application of herbicide on re-sprouts occurred during fall, 2017.

The third objective to rehabilitate two wetlands was not met because a capital budget was not passed by the legislature for over 2 years.

Image 1. Clear Creek State Natural Area after mechanical treatment of invasive and exotic vegetation, 2018.



Image 2. Reed-canary grass and silver maple encroachment in Clear Creek SNA wetland that were unable to be addressed due to budget impasse, 2018.



Job 2. Habitat enhancement at Sand Ridge State Forest and its satellites

Six objectives were set for this job in the grant:

- ✓ Create two small (~50x100 ft), shallow ponds, one in Field 19 and one near the headquarters of Sand Ridge State Forest.
- ✓ Repair/maintain well pumps supplying water to shallow ponds at Field 19 and headquarters of Sand Ridge State Forest.
- ✓ Repair/replace a well pump at the Rollo Tract of Sand Ridge State Forest to restore water management capabilities at a shallow pond and ephemeral wetland.
- ✓ Create five small (~50X100 ft), shallow ponds at Rollo Tract of Sand Ridge State Forest.
- ✓ Control woody/invasive vegetation on ~42 acres at Rollo Tract of Sand Ridge State Forest.
- ❖ *Establish native grasses on ~40 acres at Rollo Tract of Sand Ridge State Forest.*
- ✓ Create 3 small (~50X100 ft), shallow ponds at Sparks Pond SNA.
- ✓ Control woody/invasive vegetation on 47 acres at Sparks Pond SNA.

All but one objective was met. Wetlands were built at Sand Ridge State Forest and the well/pumps were repaired at the Sand Ridge State Forest and at the Rollo Tract. Five shallow ponds were built at the Rollo Tract. Forty-two acres were treated for woody encroachment and invasive species at Rollo, including three acres treated woody encroachment by Department staff and ten acres to control smooth brome in Area 4 of the Rollo Tract.

Forty acres of native grasses were not established at the Rollo Tract due to a lack of a budget.

Three small wetlands were built, and 47 acres were evaluated and treated for woody encroachment and invasive species at Sparks Pond SNA.

Image 3. Shallow ponds at the Sand Ridge State Forest Headquarters



Image 4. Map of treatment areas at Rollo Tract

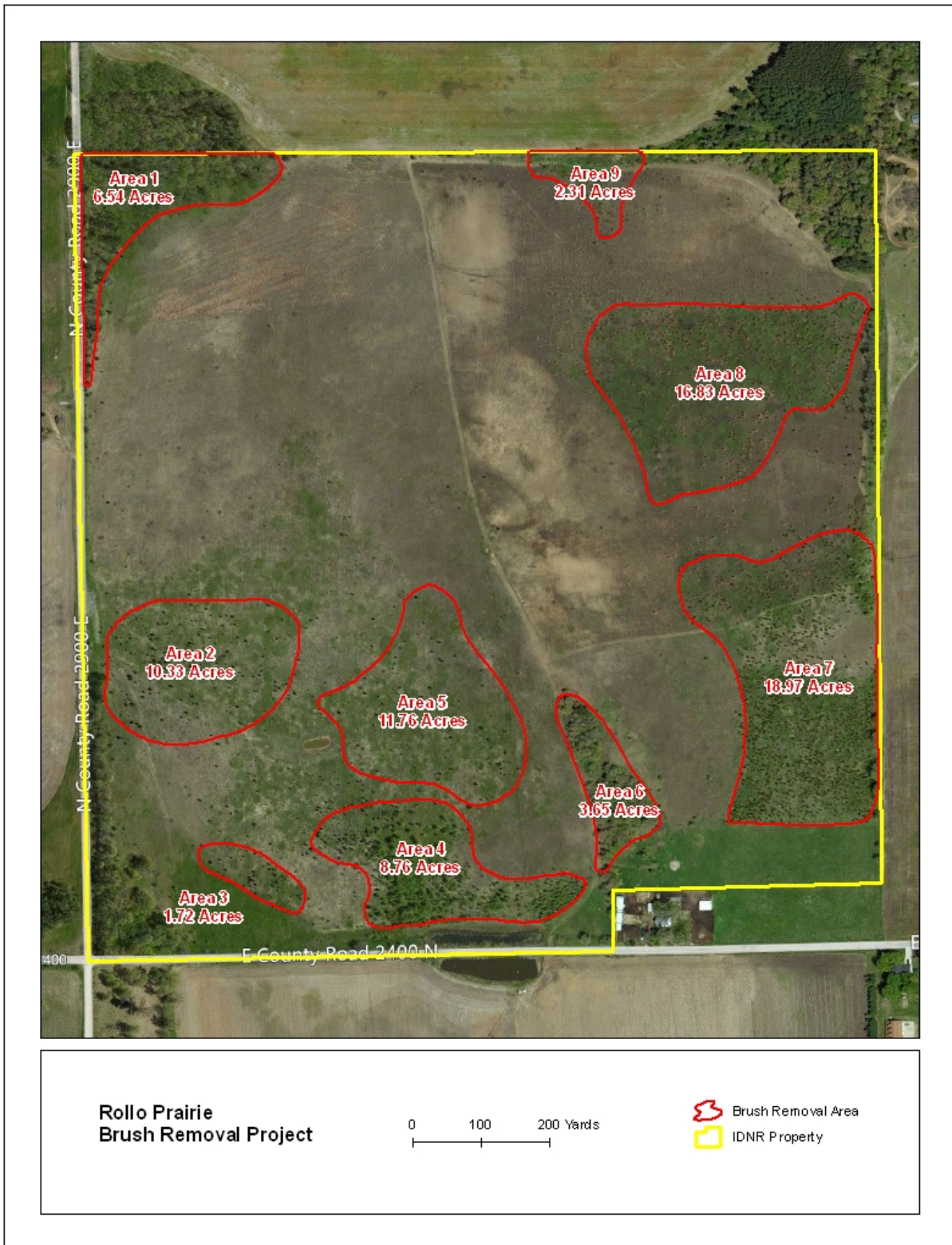


Image 5. Treated upland acres at Rollo, 2018



Job 3. Habitat protection and enhancement on private lands in Mason County

One objective was set for this job in the grant:

- Enhance and/or protect ≥ 30 farmed or prior converted wetlands (198.8 acres including upland buffers) on private lands in Mason County.

This objective was partially met by offering sign-up incentives to landowners through this grant. The incentives helped enroll 198.8 acres into twenty-two Conservation Reserve Program Contracts for Wetland Restoration, non-floodplain (CP23A). The target acres were enhanced and protected with a 1:4 ratio of wetland to grassland buffer, but the number of farmed or converted wetlands was less than the objective of 30 (24).

Image 6. Monitoring vegetation in a restored CRP wetland, 2018



Job 4. Monitor the presence of Illinois Chorus Frogs and other amphibians at improved/protected sites and at reference (unimproved) sites in Mason, Tazewell, Cass and Menard counties.

Four objectives were set for this job in the grant:

- ✓ Beginning in 2010, annually monitor the presence of Illinois Chorus Frogs at ≥ 15 reference (unimproved) sites in Mason and Menard counties

- ✓ Beginning in 2011, annually monitor the presence of Illinois Chorus Frogs at ≥ 5 improved/protected sites in Mason County
- ✓ Develop a long-term monitoring plan that meets federal standards for surveys and investigations (522 FW 12).
- ✓ Evaluate amphibian use of ponds/wetlands constructed as breeding habitat for the Illinois Chorus Frog in Mason, Tazewell, Cass and Menard counties (2015 Amendment)

These objectives were all met. Monitoring has been conducted for the duration of the project and results are summarized in Table 1. (Data collection was standardized in 2011). The long-term monitoring plan is reported by Cosentino 2014 and his results are summarized below. Evaluation of the constructed wetlands/ponds at the sites in Cass, Mason, Menard and Tazewell counties were conducted and results are summarized by Phillips et al, 2018 (Tables 2 and 3).

Cosentino 2014 – Summary:

Illinois chorus frogs (*Pseudacris illinoensis*; “ICF”) occur as a genetically distinct population in Illinois and are threatened by the loss of sand prairie habitat and ephemeral wetlands. The Illinois Department of Natural Resources initiated a long-term monitoring plan at 95 sites to track changes in the distribution of ICF. The study design was informed by estimates of occupancy and detection probability based on pilot data from 2011 to 2014. The primary recommendation was to survey 75–90 sites twice each spring. The monitoring plan was initiated in 2015 with 95 sampling locations sampled up to three times each spring. In this report, I examine occupancy data from the first three years of monitoring data to determine if changes in survey design are warranted. I used a multi-season occupancy model to make the following conclusions and recommendations:

- Overall detection probability was 0.60 (95% CI: 0.51 – 0.68), although this estimate does not consider factors that cause variation in detection probability among surveys.
- Detection probability depended strongly on the observer conducting chorus breeding surveys, with observer-specific detection probabilities ranging from 0.11 to 0.77. Observers are assigned to specific routes, and observer variation in detection probability may reflect variation in conditions along routes. I recommend collecting data on traffic and noise during surveys to determine if these conditions explain the observer variation.
- Detection probability depended on multiple aspects of survey conditions, specifically air temperature, humidity, survey date, and wind levels. Surveys should be conducted early in the breeding season and during warm, wet nights with low winds. Data on soil temperature and precipitation may be useful for gaining further insight into why detection probability varies with survey date independently of air temperature during surveys.
- An estimated 61-63% of breeding sites are occupied in the general area of suitable habitat from which sampling locations were selected. This estimate is substantially higher than yearly naïve occupancy not accounting for imperfect detection, illustrating the importance of using rigorous models of detection probability to estimate occupancy.

- Yearly estimates of occupancy probability were remarkably similar. Extinction and colonization probabilities were about 20%, suggesting significant but balanced turnover in breeding populations. Turnover may reflect true extinction and colonization dynamics or temporary emigration in which individuals skip a breeding season.
- Estimates of occupancy, colonization, and extinction probability should be interpreted with caution as they do not account for likely spatial variation associated with habitat quality and land use practices.
- I recommend continuing to survey all sites twice each spring. A third survey should be conducted at sites if detection probability is unusually low during the first two surveys.

Phillips et al 2018 - Summary

The Illinois Chorus Frog (*Pseudacris illinoensis*; ICF) is a fossorial species endemic to the sand prairies of Illinois, Missouri, and Arkansas. In Missouri the ICF is listed as Rare while in Arkansas it is designated as a species of special concern. According to Trauth et al. (2006) it is likely to be extirpated from Arkansas in the next ten years. In Illinois the ICF is a state threatened species. Threats facing the ICF include habitat loss and degradation. Adult ICF are found on the surface only during breeding in late winter/early spring and are fossorial the rest of the year. Larvae metamorphose and emerge from their natal ponds in mid-to late May (temperature dependent).

For the past several years, the Illinois Department of Natural Resources (IDNR) has been conducting management activities aimed at restoring ICF habitat in Mason, Tazewell, and Cass counties. These efforts, led by former IDNR biologist Bob Bluett, have led to the creation of several breeding wetlands and clearing of woody and exotic invasive plants at IDNR owned and/or managed sites. This proposal seeks to understand the impacts of these management actions on the distribution, abundance, and recruitment of ICFs.

The objectives of this survey were: 1) collect further detection and occupancy data for ICFs using dip-netting of late-stage larvae and compare detection and occupancy rates from 2016, 2017, and 2018; 2) determine whether results of anuran call surveys were similar to those for dip-netting for late-stage larvae, ; and 3) extend late-stage larval dipnetting of ICFs to wetlands with long-term historical occupancy of ICFs.

Methods

Objective 1. We dip-netted for ICF larvae at 12 of the wetlands sampled in 2016 and 2017. We used the same number of dip-net sweeps per wetland as in 2016 and 2017 (1 sweep per 25 m² surface area and a minimum of 4 sweeps per wetland). In 2016 and 2017, each wetland was dip-netted on three consecutive days. Because occupancy never varied between days in 2016 and 2017 (ie. if larvae were detected on day 1 they were detected on days 2 and 3, and vice versa), we sampled only one day in 2018. As with the 2017 surveys, we recorded the number of sweeps

required to capture the first ICF larva at each wetland. We split the number of sweeps evenly between the three surveyors and recorded the data separately for each surveyor.

Objective 2. We dip-netted for ICF larvae at wetlands on private property in Mason and Menard counties where farmed or prior converted wetlands were enhanced or protected through enrollment in CRP or SAFE. These wetlands were also sampled using ACS and all were positive.

Objective 3. We dip-netted for ICF larvae at three wetlands where ICFs had been detected historically using a variety of methods including ACS, visual searching for adults, and seining for larvae.

Results & Discussion

Of the wetlands that were dip-netted over multiple years, ICFs were detected all three years only at DeSutter Lined Pond 2 (Table 1). Occupancy of ICF tadpoles appears to be easily assessed by dip-netting. If ICF tadpoles were encountered in a wetland, they were usually captured within the first several sweeps (Table 2). No survey at any wetland required the full number of sweeps allocated to detect ICF larvae. The mean number of required sweeps per survey was 3.3 over all three wetlands where ICF tadpoles were detected.

ICF were heard calling at seven CRP and SAFE wetlands in March 2018 (Table 3). Our dip-net surveys again detected larvae, when they were present, in under the allotted number of dip-net sweeps. Further, the dip-net sweeps indicated that recruitment was limited to only three of those wetlands, at best (Table 4).

Of the three long-term historical sites that were surveyed by dip-net (but do not have 2018 calling survey data) ICF larvae were detected from only one wetland (Table 5).

Summary

- **Dip-netting for late stage ICF larvae is shown to be an effective method for detecting ICFs as captures occurred within the first few sweeps and always under the number of sweeps determined by wetland area.**
- **Anuran calling surveys (ACS) are often used to establish occupancy of wetlands by Illinois Chorus Frogs, but ACS can be misleading because there is a significant disconnect between the presence of calling males and actual recruitment of metamorphs at a given wetland.**
- **Dip-netting for late-stage larvae is a much better indicator of wetland suitability and ICF reproductive success as it establishes that some recruitment will likely occur at a given wetland, given there is enough water remaining at the time of dip-netting to allow the late-stage larvae to metamorphose.**

Job 5. Reporting

One objective was set for this job in the grant:

- ✓ Prepare and submit 5 annual and one final reports of progress

This objective was met. All annual reports were submitted.

Future Plans

Work on Illinois Chorus Frogs will likely continue as this species is under review by the USFWS. It is clear from this project that Illinois Chorus Frogs will use man-made wetlands, but questions about recruitment, habitat preferences and optimal water level management remain. In addition, there is much more to learn about this animal's life underground, whether breeding attempts are made during drought years, tolerance to and effects of modern agricultural methods and chemical products, longevity of individuals and how the species copes with competition and predation from other species, namely bullfrogs.

Literature Cited

Cosentino, B.J. 2014. Monitoring plan to detect trends in occupancy of Illinois chorus frogs (*Pseudacris streckeri illinoensis*). Illinois Department of Natural Resources, Springfield, Illinois, USA.

Dreslik, M. J. 2015. Conservation needs of the Illinois Chorus Frog: a survey of Illinois' herpetological community. Illinois Natural History Survey, Champaign, Illinois, USA.

Hulin, A.C., Golden, E.P. and Bluett, R.D. 2015. Monitoring Occupancy of the Illinois Chorus Frog (*Pseudacris streckeri illinoensis*): Are Plots or Ponds the Best Fine-scaled Sampling Unit. Transactions of the Illinois State Academy of Science, Vol. 108 pp 53-58

Illinois Natural History Survey. 2017. Conservation guidance for Illinois Chorus Frog (*Pseudacris illinoensis*). Prepared for the Illinois Department of Natural Resources, Division of Natural Heritage.

Phillips, C., A. Kuhns and J. Crawford. 2018. Monitoring the Impacts of Management Activities on the Illinois Chorus Frog in Central. Final Report for T-62-D-1.

Survey data form used for monitoring

Call Survey for Illinois Chorus Frog (Complete one Datasheet for Each Section)

Date:	Observer(s):	Section ID:
Route (circle one): Green Valley/Mackinaw Forest City/Manito Havana/Easton Mason City Oakford East Oakford/Bath Greenview Arenzville Meredosia/Beardstown Olive Branch		

Environmental variables at start of survey in this section (complete for each section on your route)

Air Temp (F):	Humidity (%):	Wind*: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	Moon visible: Y <input type="checkbox"/> N <input type="checkbox"/>
*Wind codes: 1 = calm (<1 mph), 2 = light air (1-3 mph), 3 = light breeze (4-7 mph), 4 = gentle breeze (8-12 mph), 5 = moderate breeze (13-18 mph), 6 = fresh breeze (>18 mph); Do not conduct survey.)			

Times you started and ended surveys in this section

Time you started listening at first post for this section (e.g., 8:46 or 20:46):
Time you stopped listening at last post for this section (e.g., 9:12 or 21:12)*:

*For example, if you stopped at three different locations to listen for ICFs in this section, the "time you stopped listening at last post" would be time you completed listening for ICFs at the third location.

Information about effort, interference, and encounters of target species (fill each box for each listening post)

Site data	Post 1	Post 2	Post 3	Post 4	
Total time @ post (minutes; complete for each post)					Use as many listening posts as needed to verify presence/absence of ICFs in a section (typically, 1-3). Listen for ICFs for up to 5 minutes at each post (less if you hear ICFs before 5 min is up). If you hear ICFs at your first listening post, and are confident about its origin within the section, you are done. See instructions for more guidance.
When did you first hear ICFs at this post? (use code 1-5)					NA=Not heard; 1=heard ICFs within first minute; 2=first heard ICFs between minutes 1&2; 3=first heard ICFs between minutes 2&3; 4=first heard ICFs between minutes 3&4; 5=first heard ICFs between minutes 4&5
Polygons with ICF choruses					NA=No ICFs heard at post. U=heard ICFs, but could not associate location w/polygon. If you are confident about origin of chorus from a habitat polygon, record ID of polygon(s) from your map.
Noise (y/n)					Was your ability to hear impaired by noise (e.g., vehicles, planes, dogs, livestock)?
Water (y/n)					Did you see standing water in the section? This applies only to areas ICFs might use for breeding, such as sheet-water in flooded fields, semi-permanent wetlands, and still water in road ditches – not rivers, flowing streams, lakes, or large ponds
# Cars					Number of cars that passed while you were at the listening post
Species	Post 1	Post 2	Post 3	Post 4	
Illinois Chorus Frog (use amphibian call index)					Amphibian call index: 0 = species not heard 1 = distinct calls of individuals can be counted; no overlapping calls 2 = individuals can be distinguished; some overlapping calls 3 = full chorus; constant and overlapping calls
Western Chorus Frog (y/n)					Did you hear western chorus frogs <u>in section you are sampling</u> ?
Whip-poor-will (y/n)					Did you hear whip-poor-wills <u>in section you are sampling</u> ?

Table 1. Results of annual Illinois Chorus Frog surveys from 2011 - 2018 in Illinois Mason, Menard and Tazewell counties (MMT), Cass, Morgan and Scott counties (CMT) and Alexander (AL)

Route	Region	Survey Sections	2011	2012	2013	2014	2015	2016	2017	2018
		N=	Presence/absence							
Green Valley/Mackinaw	MMT	8					0/8	2/8	0/8	0/8
Havana/Easton	MMT	10					2/10	4/10	5/10	7/10
Mason City	MMT	11					3/11	4/11	6/11	4/11
Greenview	MMT	9					2/10	0/9	1/9	0/9
Oakford East	MMT	10					4/10		4/10	5/10
Oakford-Bath	MMT	9					2/9	5/9	2/9	0/9
Forest City/Manito	MMT	10					0/10	4/10	2/10	2/10
Meredosia/Beardstown	CMS	8		1/8	4/8	4/8	5/8	1/8	2/8	2/8
Arenzville	CMS	8		1/8	3/8	2/8	6/8	5/8	6/8	7/8
Olive Branch	AL	10	9/10	8/10		4/10	9/10	10/10	8/10	10/10

Table 2. Results of dip-netting for Illinois Chorus Frog (ICF) larvae in 2016, 2017 and 2018 at wetlands in Mason and Tazewell counties, Illinois. Phillips et al 2018.

Site Name	Wetland ID	County	Latitude	Longitude	Pond Area (m ²)	#sweeps	ICF detection 2016	ICF detection 2017	ICF Detection 2018
DeSutter Lined Pond 1	320	Tazewell	40.45252	-89.81015	220	9	yes	no	no
DeSutter Lined Pond 2	323	Tazewell	40.45075	-89.80807	394	16	yes	yes	yes
DeSutter Lined Pond 3	321	Tazewell	40.45443	-89.80193	283	12	yes	yes	no
Richardson LIP Wetland 1	307	Mason	40.42698	-89.79012	291	12	no	no	no
Richardson LIP Wetland 2	308	Mason	40.42579	-89.79199	255	11	yes	no	no
Rollo lined 1	311	Mason	40.40715	-89.80792	433	18	no	no	no
Rollo lined 2	310	Mason	40.40746	-89.80799	469	19	no	no	no
Rollo lined 3	309	Mason	40.40779	-89.80811	368	15	no	no	yes
Rollo lined 4	312	Mason	40.40768	-89.80853	412	17	no	no	no
Rollo Road Pond	314	Mason	40.40543	-89.80661	1230	50	no	yes	no
Rollo Wilker's 2008 Pond	313	Mason	40.40723	-89.80882	133	6	yes	no	no
Sparks Cattail Pond 2	315	Mason	40.39594	-89.81714	1197	48	no	no	not sampled

Sparks Lined Pond 1	317	Mason	40.38857	-89.81908	450	18	no	no	no
Sparks Lined Pond 2	318	Mason	40.39321	-89.81757	573	23	no	no	not sampled
Sparks Lined Pond 3	319	Mason	40.39371	-89.81818	376	15	no	no	not sampled
Sparks Manito Blacktop Pond	322	Mason	40.38399	-89.81592	760	31	no	no	no
Sparks Wooded Wetland	316	Mason	40.3912	-89.81765	1930	78	no	no	not sampled

Table 3. Results of larval dip-netting for Illinois Chorus Frog (ICF), 8 May 2018, at wetlands with historic occupancy in Cass and Tazewell counties, Illinois. Phillips et al 2018.

Site Name	CRP Contract Number	County	Latitude	Longitude	Pond Area (m ²)	#sweeps	ICF Detection Dip-net
Conn Sand Pond		Cass	40.0768	-89.9987	893	36	yes
Hilst South		Tazewell	40.3870	-89.6848	314	13	no
Jibben Pasture Pond		Tazewell	40.3807	-89.6618	920	37	no