

**12 October 2018**

**Colorado Bat Working Group Annual Meeting – Denver, CO, CPW State Office**

**Attendees:** Dan Neubaum, Kirk Navo, Chelsea Beebe, Thomas Rains, Matt Rustand, April Estep, Lance Carpenter, Robin Sell, Kevin Laves, Steve Taylor, Jeremy Siemers, Rob Schorr, Beth Stevenson, Paul Cryan, Tina Jackson, Emily Snode-Brennanan, Mikele Painter, Ed Schmal, Brooke Hines, Karen Fox, Christine Avena, Lisa Thompson, Erica Crosby

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Introductions

**Secretary position:** CBWG is in need a secretary now that Lea is not in CO – Rob Schorr volunteered

**New Reps:** Matt Rustand (BLM), Michelle Verrant (NPS), Lance Carpenter (CPW)

**Board Member Roles:** Dan led a discussion about Board Member roles, positions, and officers – the discussion centered on who should be in what positions, and who will volunteer to represent a particular group

**Mission Statement review** – Dan came up with a draft statement for the CBWG Board that he read and will send around to the membership for review: “Provide an advisory panel to assist the Colorado Bat Working Group Chair in promoting bat conservation goals in Colorado”

**Western Bat Working Group Meeting** – Tulsa, OK, April 22-25

The registration fees for the WBWG meeting will go toward one-year membership in WBWG. There was a discussion about timing of membership dues – should they be paid every other year? Dan suggested that paying dues every other year to match WBWG meetings might make sense for matching fee payment with voting and meeting fees. Pitched the idea of a two-year membership tied to meeting as well which working group liked. WBWG is figuring some of this out. Dan also requested nominations for WBWG board (per president Katie Gillies).

**Retirement recognition** – Randy Ghormley and Missy Siders retired recently so please extend congratulations and thank them for their service on CBWG

**Website updates** – Dan will provide Rob with Mission Statement and Board Member adjustments for the website.

**Colorado Bat Conservation Plan** – Kirk Navo

The final was completed March 2018 and is now available on the CBWG website. Kirk took us through the chapters highlighting the justification and organization. This version has dropped reference to North American Bat Conservation Partnership, which may be defunct now. Several new chapters have been added; there are now 13 (vs 7 chapter and 3 appendices in previous plan). Each chapter has an overview of threats/issues, breakdown of threat, and management. There is now a Literature Cited to each chapter for easier consumption and access to the published literature. This version has dropped the use of Appendices and converted those into chapters. Also, this version has dropped Species Rankings because the Bat Matrix took a more rigorous approach to assessing conservation priority. However, more information was added on the Colorado Bat Matrix.

Kirk took us through the chapters – Mining impacts, Cave management, Rock crevice management (new), Forest/Woodland management, Rangeland management, Urban development, Disease (new), Energy Development (new), Guidance for scientific activities, Bat roost protection (gates, roost site buffers) (new), Species status (population trends and monitoring), Bat matrix, Species accounts.

Tina was able to hand out a few paper copies that she had printed.

**Pesticides and bats** – Karen Fox, CPW wildlife veterinarian

There have been recent records of die-offs of young bats submitted at end of August. There were multiple records, including 20+ bats submitted from a house along the Front Range, 12+ Townsend's big-eared bats from mine in southeastern Colorado, and 12+ from the Rifle/Carbondale area. Four of the bats tested positive for Furadan (carbofuran), which is usually for targeted use, and it is not broadly available. All of the young dead bats had milk in stomachs. Furadan kills quickly, but guano below the house tested negative.

Steve Taylor comment – baseline contaminants can build and cause population impacts. We should also be alert to bioaccumulation of a host of contaminants. What suite of contaminants are being screened for? Karen – pesticides and organochlorides are part of the screening.

Dan – what is the Texas lab's (where contaminant analysis is conducted) capacity for handling bats that are submitted? Karen – no issues; they have the capacity to handle more samples.

Mikele – how should samples come to Karen? Karen – refrigerated is best if within 2 days; or frozen if longer.

Paul – Furadan would be ideal for killing off bat populations because these organophosphates/carbonates don't persist and can keep deaths localized.

If you find 3+ bats, Karen is interested in getting those bats, so please contact her at [karen.fox@state.co.us](mailto:karen.fox@state.co.us). Karen and Dan will generate a quick action plan to share with group.

**NABat monitoring efforts (for Brian Reichert)** - Jeremy Siemers

Jeremy gave an overview of the "phases" of NABat development, proceedings from meetings (NABat Plan 2016), and implementation.

2016-present: We are in Phase II, which is building infrastructure at USGS to support the NABat program. Lots of standardization and methodology coordination among international and state boundaries.

NABat online tools: has Guidance Documents, Master Sample (for identifying 10x10km sample units; shapefiles and other georeferenced file), Project Documentation, NABat Project Database, Data Upload, and "Find my Grid Cell" web application. [www.nabatmonitoring.org](http://www.nabatmonitoring.org).

Coming soon: Project mapping and reporting tools, User-role based data sharing, Data explorer (the ability to query and download data from a multitude of sources, including NABat, WNS, and historical bat data. The NABat Monitoring Website will eventually have WNS Surveillance Data, WNS Diagnostic Database, NABat Survey Data, Historical Bat Pub Data, and Smithsonian Bat Banding Database.

Matt – how can we set up a new project? There was a conversation about how to use the NABat site to begin establishing sampling areas and points.

Acoustic data processing pathway – On the website there is a guidance for acoustic analysis, including general workflow, how to name files, and software analysis specifications.

Maternity colony monitoring – if you are doing maternity colony monitoring please share your protocols with the bat community ([breichert@usgs.gov](mailto:breichert@usgs.gov))

Acoustic analysis summary – There is data being collected at 39 states and 8 provinces

Future NABat planning – USGS is working to secure funding for staffing and infrastructure and the development of NABat regional hubs for data storage and analysis

Starting in 2019 – Status and trend analysis; data products for agencies, such as population assessments to understand WNS impact; 5-year report with updated distribution maps

### **2018 NABat Accomplishments in CO – Jeremy**

2014 – 6 stationary/9 mobile

2015 – 30 stationary/2 mobile

2016 – 50 stationary

2017 – 50 stationary

2018 – 52 stationary (3 citizen science, 24 Royal Gorge Field office)

There was a bit of discussion about how to use citizen scientists, consultants as interested parties that might deploy detectors, and gaining access to private lands.

### **Use of data for CHAT efforts – Tina**

The Critical Habitat Assessment Tool is a decision support tool. There is an effort with Western Association of Fish and Wildlife Agencies to get the NABat data integrated into the CHAT tool for decisions for land management decisions/siting of impacts. CHAT has been useful for interstate projects like powerline development/maintenance.

### **WNS National issues – Paul**

We looked at [www.whitenosesyndrome.org](http://www.whitenosesyndrome.org) website to see latest WNS map

There was a bit of discussion about the Pd records from NM – swabs came back positive in NM from a NM lab; second review by another lab (WI) came back negative. There was some discussion of swab-positive Pd vs WNS.

Paul discussed his work at Wyoming's Ft. Laramie bat colony – Paul describes the MYLU and EPFU colonies that are in a 10x10ft bat house bat house, and the diagnosis of Pd from that location.

There was a discussion about increasing swabbing efforts in late spring/early summer throughout CO, but there is not a clear plan of attack for sampling bats at this scale.

There was discussion about the current WNS funding that is available (WNS small grant, Bats for the Future fund).

### **WNS effort through CBWG – Dan**

Dan started a conversation about how CBWG Bioblitz in spring could be directed toward sampling for WNS in CO. People should pitch location ideas where they think springtime bat sampling should occur to sample for Pd to Dan. Several sites will be chosen and folks sought to work them for a night or two.

### **Hubbard and Spring Creek cave gating projects – Dan**

Dan showed us pictures and summary counts of bats pre- and post-gating at Hubbard and Spring Creek caves. Numbers of hibernators surveyed post gate install match those before construction.

### **WNS Decon encouraging efforts - Dan**

There was a discussion about to what level do we encourage WNS decon among the climbing community. It was suggested that we provide the decon protocols and recommend people do it, but there is not enforcement that would mandate it. There was some agreement that recommending any equipment used for subterranean recreation should be subjected to decon protocol.

Should we advise pest control operators to decon their equipment? – these professionals are working to remove the animals and may have their equipment in contact with Pd. There was some discussion about whether these professionals would experience a population that would be harboring WNS. There is a BMP for pest control operators on the WNS site.

### **Cave closures USFS/BLM – What actions do you think will be happening at these closure sites.**

Matt (BLM) - If WNS is detected within 100 miles of BLM lands, BLM will implement needed closures in collaboration with CPW, Colorado Cave Survey, and local CO cave grottos. The cave must be:

1. Cave must be biologically important;
2. Must be closed under federal register notice; and
3. BLM will continue to work with CPW on their WNS plan.

White River NF current procedures are: mandatory decon at all caves and year-round closure for certain caves where important swarming events occur or where maternity colonies occur. If WNS is detected within 250 miles of ranger district boundary there will be year-round closures on all caves with targeted openings.

Note: The 250 mile distance is based on a USFWS-recommended distance

Kevin (USFS) – 2013 Rocky Mt USFS signed their EA. Adaptive management approach of 3 tiers based on status and occupancy. Confirmation of WNS in SD and WY triggered a Tier 2 response, which may result in some restricted access at caves/mines. USFS was working under Tier 1. Kevin took us through the decision making steps and restrictions in the USFS' EA. Please see that EA for more details ([https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5414178.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5414178.pdf)). Kevin opened up the request for anyone to share information and feedback as USFS moves into a Tier 2 phase.

### **Exclusion advice request from the public – Dan**

Can we put bat exclusion advice on the website? Almost unanimous agreement to do so.

Also, there was agreement on providing bat house construction guidelines. A committee was put together to deal with crafting exclusion advice for the public (Rob, Paul, Tina, Dan). Steve suggesting taking a look at Illinois Bats website for what they provide for guidance.

### **AML Status Update – Lisa Thompson/Erica Crosby**

Lisa and Erica take us through a host of mine features projects.

2017 – 61 bat grates were installed and approx. 250-300 mine features were evaluated

Fourmile Fire Area – since 2010, 8 mine safeguard projects have occurred in this area

The current process for evaluating bat presence at mine sites is through a contract between CO DRMS and Kirk. Kirk makes recommendations for where gates should be installed, and he provides that to Tina to disperse to the CPW bios to have them potentially surveyed in the future.

#### **Project updates -**

Maternity Colony monitoring of MYLU – Rob

Summary of mark-recapture project using PIT tags to estimate overwinter survival of MYLU

Maternity and hibernation colony monitoring of COTO – Jeremy

Summary of mark-recapture project using PIT tags. Discussion of propensity of COTO to lose tags.

New range maps for bats – Dan

Dan has been using capture records from across the state to create new distribution maps.

#### **Roundtable**

Kirk – Kirk believes there should be more guano sampling for Pd

Chelsea - JeffCo Open Space small grant request for proposals is being announced soon

April – She will be conducting more acoustic surveying, and in 2018 she captured an eastern red bat

Christine – finishing up Phd, and there is a recent publication of er data analysis

Rob – Climbers for Bat Conservation is seeing more climber-submitted data

Beth – finishing up with CNHP and is available for future employment

Paul – “United States Bat Species of Concern: A Synthesis” O’Shea, Cryan, Bogan 2018

([http://researcharchive.calacademy.org/research/izg/PCAS%20v65%20Suppl%20I%2028Sept18%20Bats%20\(CAS%20web\).pdf](http://researcharchive.calacademy.org/research/izg/PCAS%20v65%20Suppl%20I%2028Sept18%20Bats%20(CAS%20web).pdf)), future

deployment of temp/humidity backpacks on bats; wind turbine illumination

to reduce collisions; Fort Laramie mark-recapture of MYLU/EPFU

Tina – WNS surveillance is continuing and with bat week (Oct 24-31) coming up there is a push to get governors to provide bat week proclamation;

Mikele – Jenny Windorski hosted a “Come see our bats” event to watch the out-flight at Leadville Fish Hatchery.