

CBWG Meeting

1 November 2013



USGS Office, Fort Collins

In attendance:

Ed Schmal, Mike Sherman, Kristen Philbrook, Roger Rodriguez, April Estep, Raquel Wertsbaugh, Toni Piaggio, Mark Hayes, Michael Schirmacher, Jeremy Siemers, Paul Cryan, Kirk Navo, Dan Neubaum, Mike Dixon, Martina Pernicano, Jim Lawton, Cyndi Mosch, Laura Ellison, Tina Jackson, Donald Solick, Mikele Painter, Logan McConnell, Jon Knudsen, Chad Olson, Katie Ozenberger, Laura Heiker, Amy Englert, Randy Ghormley, John Gumbs, Christine Avena, Val McKenzie – by phone: Rob Schorr, Julie Annear, Missy Siders, Eric Freels.

1. Discussion about the **“Biologically Important Bat Roosts”** – WNS state committee asked the CBWG to produce a document like this. This document ties in to the CO Bat Matrix. Dan wants this to be a useable tool for managers. Mark Hayes and Apple Snider provided useful comments. We discussed cave closures Tier 1 – all caves are considered open, but targeted closures; Tier 2 if WNS is found within 250 miles of a Ranger District then all caves are considered closed to any entry by the public. A permit is needed to get into those caves. The authors will be adding an executive summary. It was suggested that a flowchart would also be useful. Apple will be adding these 2 things to the document. This document will be helpful in the NEPA process – gives credibility and gives the decision-makers some faith in the decisions made about whether a roost is biologically important. We know we have a lack of information, but we still need to make decisions. Sharing data is important. Paul mentioned that caves that have lots of swarming activity (acoustic) may be important for disease transmission and should be monitored. They aren’t necessarily there through the winter, but may only use it during certain seasons. This document is intended to be a guideline and we decided to not go for any formal approval up the agencies’ chains. After a couple of years, maybe get it approved by the various agencies. It was suggested that CBWG approve and then promote the heck out of it.
2. **NABat overview and BPD**
Laura gave an overview of the development of a North American Bat Monitoring Program or NABat and the Bat Population Data (BPD) Project that is intended to be the data framework for the program. [Here’s a blurb written up for the upcoming winter WBWG newsletter:](#)

North American Bat Monitoring Program (NABat) – Participation in 2014 Pilot Studies being Sought

The last of 4 workshops for the planning of the North American bat monitoring program took place in Fort Collins, Colorado 4 – 7 Nov 2013. Fifteen biologists/statisticians from diverse agencies gathered for the final think tank session to establish framework and design. Over the course of the 4 days, the group worked on writing a technical document, including protocols for gathering acoustics (stationary passive stations and driving transects) and colony count data, which will be released in spring 2014.

The goal of this program is continent-wide monitoring of bats at local to range-wide scales. Data will be collected in a continental 'Bat Population Data (BPD) Project' and analyzed for trends in relative population abundance and species distributions. This program will provide to biologists and managers "State of North American Bats" reports, trend analyses to facilitate assessment of impacts of threats such as white-nose syndrome, climate change, and wind energy development.

The program is designed with the best knowledge to date, although there is much that will be learned in pilot studies to refine the design, and thus it is expected this program will evolve over time. Currently, the base unit of the program is 10 km x 10 km grid cells overlaid across Canada, US and Mexico. A weighted random draw will provide a list of grid cells for monitoring. It will be up to agencies such as state wildlife programs, Heritage Programs, National Parks, USFWS refuges, biologists, provincial governments, NGO's, Community Bat programs, etc. to 'adopt a grid cell' for long term monitoring. The NABat committee is looking for interested parties to pilot this program in their area(s) during the summer of 2014. The design now (pending peer review) is that 2 – 4 bat detectors would be deployed passively for 4 – 7 nights within one 10 km x 10 km grid cell, and a road within this grid would be driven on 2 nights during this same deployment period. The road could be as long as 30 km and extend into neighboring grid cell(s), and would be driven at 25-30 km/hr with a bat detector/microphone on the roof of the vehicle. Colonies of bats that can be counted should also be included in the BPD data and may be valuable in the overall statistical analyses over time. "Legacy data" for counts of bats done in past years are currently being incorporated into the BPD, and locating new summer and winter colonies for future monitoring is encouraged. If you are interested in participating in a pilot study in 2014, or would like more details, contact Laura Ellison ellisonl@usgs.gov, Cori Lausen clausen@wcs.org, or Susan Loeb sloeb@clemson.edu.

3. **Bat Banding Moratorium** – Rob led a discussion on bat banding. Need more research on the negative effects of banding on bats – a double-marking study with PIT tags and bands, etc. John Gumbs work in Pennsylvania and New Jersey – they band every bat they get their hands on. Have good recaptures and potentially getting good survival estimates. They will be publishing a paper on this soon. Rob made the point that one of the main assumptions in mark-recapture analyses is that marking technique does not negatively impact the animal.
4. **Bats and AML** – discussion about **gate designs**. Who is tasked to do the monitoring of bat-gated roosts? Putting up gates without a monitoring plan is not good. We discussed the need for post-gate monitoring. There is not enough time given to the biologists CPW to go out and do those surveys. Who's doing it, who's paying for it, etc.? Need a plan to go forward. It's a chaotic mess right now. CNHP helped the past couple of years. Need to find the funding for this important work. We discussed the need for multiple agencies at the table – BLM and USFS.
5. **Formal board for CBWG?** We discussed officially electing members of CBWG so that people can plan their time and get stuff done. A small board may be a good idea. Representation from all of the agencies. Agency members are non-voting members? That way we get around the federal govt issue with ethics. We decided that five people would be elected to be official members of the "board".

6. WNS –

- Paul gave an overview of the recent research findings with the newly named fungus, *Pseudogymnoascus destructrans* or Pd. TX parks and wildlife is doing surveillance for Pd near the site in OK.
- Tina gave an overview of the WNS workshop in Boise, ID. A couple of take home messages that she went home with: **lower mortality at drier sites**. What is dry? 85% humidity is considered dry. Mark looked at some of the initial data and used 70% as humidity levels.
- **News from BLM** – plan to address WNS – Eric Freels is leading that effort. 1st of January will have a plan out to address WNS. CBWG will have a chance to look it over. Is it going to be like the USFS plan? There will be a trigger if WNS is found in the state, closure of caves/mines, but not as broad as the USFS (250 km). Went smaller with buffers...no permitting system. They want a little more guidance about biologically important roosts and how to go through the criteria.
- **Rick gave a presentation of the USFS Region 2 cave closure.** Blanket cave closure expired July 31, 2013. Three tiered management approach – Tier 1 – prior to arrival of WNS, 250 miles of a forest, caves are open with targeted closure for caves important to bats. Tier 2 – WNS in Region, 250 of confirmed county, blanket closure. Tier 3 – WNS is endemic or has minimal impact on bat populations, management reverts to the Forest Plan direction. Emphasis on education for Tier 1. Winter closures of all known cave hibernacula. Decon at all known hibernacula. Gear from WNS states and provinces prohibited. Registration required to access caves that are open. Cave closures – 12 caves, 2 year round closures 10 seasonal. Black Hills, Bighorn, and Shoshone NF also have closures. Caves can be added or removed from the list based on new information. Appropriate work permitted – science/survey with appropriate decon. Can quickly change based on the new science. Web-based registration system so that customers can provide basic information. Requests are screened – approved as appropriate. People are actually using the website. 172 requests for cave access across the region – majority on the White River. Public 59% vs NSS 40%. They are getting the word out to the public about WNS. Learned of 4 new caves. Majority of requests are from the western slope and the Denver area. IL, MA, TX. Fulfurd Cave is the most requested cave to have access (from the website). Keep this up – policing done last year and some warnings were issued. Need to demonstrate that the USFS is committed to this course of action. Option to submit a trip report after the cave visited. Haven't enforced this post-trip thingie. Oct 15 through April 15th on White River. Administrative closure, not actual physical closures.
- Tina – update on **WNS CPW winter monitoring**. 4th winter with SM2s at sites. Amy analyzed 961,800 WAV files. Did a comparison of iButtons and HOBOS. iButtons seem to be working ok. Some break. Troubleshooting ideas for people on how deploy, how program, where the microphone is positioned, etc. How the calls are processed. **Statewide planning – still working off the existing response plan.** Ideas in Boise to incorporate. Continuing with the same monitoring plans as the past few years. WNS committee hasn't met since April. Not a lot of regular conference calls...once a month used to have them.

- Dan Neubaum: continued **swarming work for 3rd season** – conducted surveys at multiple cave sites. Lots of activity at multiple sites. Are the bats interacting? Glow tags at multiple sites – confirmed marked bats going back and forth to different sites. They are intermixing in the same night at multiple sites. This could be important in disease transmission. Matings, landings on the substrate, etc. Species involved *Myotis volans*, *M. lucifugus* (MYLU), *M. yumanensis* (MYU), *M. evotis*, *Eptesicus fuscus*, *Corynorhinus townsendii* (COTO). Continuing to help with the acoustic work. A rock fell on one of the detector setups and demolished the setup!! SD card was still intact. Also continued work on **radiotracking MYLU**. Where do they go in the winter? Don't turn up in cave surveys. Tracked to boulder fields. Put out seven week radios this fall and did not track any bats to a boulder field. Rock crevices, trees aspen cottonwoods, buildings. **PIT tagging COTO at a site a couple of years ago**. Found bats in a cave 30 miles away – winter congregation...maternity colony. Dan discussed Biomark vs. Avid. Biomark tags are not encrypted. They read much better than AVID. 1,000 individuals at the site!! Thermal imaging and IR used to count this number.
 - Ed Schnaal gave an overview of a project where 13 **MYU (all females) were radiotagged near Pueblo Reservoir**. Tracked these individuals to crevices, cliff faces, cracks, large dam on the Arkansas River, and lots of bridges. Couldn't find them after a couple of days despite driving around and trying – 1.5 miles sensitivity – barely touching the surface of the habitat that is available.
 - Mike Sherman – **SM2 units at AML up by Nederland, Boulder, and up the Poudre Canyon near Rustic**. Solar and nonsolar setups. Can share setups with everyone. **City of Boulder open space, 3 caves to visit in a couple of weeks**.
7. **Christine Avena** – working in parallel with amphibian diseases. 2nd year at Boulder. **Swabbing for bacterial species on bats for potential application to WNS related question**. Swabbing takes only 15 seconds. 14 nights of capture summer and fall, 12 total locations, 160 bats sampled, number of species – 8. MYLU skin microbial communities are very distinct among sites (some are only 3 miles apart in NY and their skin communities are very different). Site seems to matter more than species as far as microbial communities. The environmental samples are very different than what has been found on the bats (from those sites). Can you potentially put bacteria into sites to help bats combat WNS? Open to getting as many samples in CO next summer. **Amanda is a PhD student at CU Boulder. She is just getting started on bat work and wants to work on agricultural issues and bats**.
 8. **John Gumbs – UV overview**. 2008 and 2009 New Jersey – developed this technique. He can look at a cluster of bats and find Indiana bats (MYSO) – unique facial fluorescence. MYVO and MYLU different fluorescence of teeth and feet (at Groaning Cave). John's work primarily takes place in New Jersey and Pennsylvania. His company is called BATS Research Center. Started banding in 2009--banded 1,000 bats. Why UV? Provides a non-contact method of scanning bats for Pd. It minimizes handling and disturbance of bats. Provides early detection of Pd/WNS compared to waiting for visible signs to appear. Juvenile bats do not fluoresce. Research is ongoing...still more questions to ask about using UV. He thinks it will be a good field research tool or lab tool.
 9. **CBWG Conservation Plan – need to revise.** 😊

10. **Wind energy** -- Paul gave an overview of the recent literature. Hawaiian Islands – *Lasiurus cinereus semotus* have had multiple mortalities. More than 20 fatalities on 3 different islands. Not a lot of coordination among wind energy facilities. Acoustic deterrents are showing some promise. Mark Hayes described some of the work he's been doing looking at large spatial, continental scales and species distribution modeling. He's including bioclimatic data, phenology, topography, and combining these data to develop models for where bats are occurring compared to randomly selected points on the landscape.
11. Roger gave an **overview of the Santa Fe WBWG Matrix Revision** effort in April of this year.
12. CBWG membership stuff. **Bat Blitzes?** Do we want to do this again? People were interested in helping out on different projects around the state...like the Elephant Mine PIT tagging study that Dan organized a couple of years ago. Swarming efforts? Are there areas in Colorado where we could focus on getting more data (e.g., Purgatory River)? The trip could be an opportunity to teach decontamination procedures, perhaps?
13. Remember – **CBWG has 2 email lists. Formal Members & Non-formal Members.** Formal members receive more information, email forwards, and general WBWG/CBWG business related communications. Formal members have voting rights in matters of the WBWG / CBWG. If you wish to become a formal member, sign up for a free membership at the WBWG website. Here is the link: [Western Bat Working Group](#)