

 <p>Front Range Roundtable Fuels Treatment Partnership</p>	<p>Monthly Meeting</p>	<p>Wildlife Working Team</p>
<p>Created by: Terra Lenihan</p>	<p><i>Meeting Minutes</i></p>	<p>Tuesday, November 19, 2013</p>

Meeting Name	Monthly Meeting – November 2013
Meeting Date	Tuesday, November 19, 2013
Meeting Time	10:00 AM – 3:00 PM MDT
Venue	Colorado Department of Fish & Wildlife, 6060 Broadway, Denver
Attendees	Gali Beh (Beh Consulting), Terra Lenihan (Beh Consulting), Rick Truex (US Forest Service), Casey Cooley (Colorado Division of Parks and Wildlife), Lynne Deibel (US Forest Service, ARP), Felix Quesada (US Forest Service, PSICC), Jenny Briggs (US Geological Survey), Steve Germaine (US Geological Survey), Janelle Valladares (US Forest Service)

Meeting Notes

1) Introductions and Ice Breaker

a) Wildlife team hasn't met since August. We need to build back our momentum. Hoping to have a draft report by February. Lynne went over availability for each person. Team discussed what impact the furlough had on their agenda/schedules. Jenny asked if any guiding documents were sent out. Lynne described that now we are getting back going; no documents were sent out. Jenny said that the LR team has a very positive outlook on the work that the Wildlife team was doing. Gali described that there are no members yet on the Understory team.

2) Team Regroup/Q&A

- a) Lynne – described where we left off and our action items.
- b) Rick – tracked various documents and action items that are ongoing. He's been looking at the document design team's question document. Rick passed out and discussed the Front Range CFLRP Wildlife Monitoring Recommendations outline that he and Lynne started. We will walk through it today. Sections 4 – 7 need more attention. Some considerations:
- This is a stand-alone document, and not an appendix to the monitoring plan. Goal to be done by February 2014. We need to have these recommendations to the LR team by their February meeting (in draft form).
 - Will come up with a pilot for next summer to get a better idea of cost/benefits, etc. We can ballpark the estimate.
 - Rick and Lynne will give an update to the LR team in December.
 - Gali said the original monitoring plan was started in November and finished in May. But Jenny pointed out that was too late to implement that summer. They missed that summer, and the CSE monitoring did happen. Jenny thinks trying to hit that February mark is a good target. Lynne said it gives us a safety net in case there are changes since it is a "pilot." Jenny thought the LR team is ready for a summer pilot. Rick said a pilot is more of a first step. The data from the pilot will be important.

The methods and metrics will be the same. Jenny said Rob Addington from CFRI is charged with leading a team for evaluating and monitoring data in a more systematic way than they have done in the past. In the past data were presented when ready. When the Forest Service was ready to present, they would. It's been sporadic. The team voted to have an annual meeting in which the monitoring data is presented. There is a formal process. Team agrees upfront on the decision making points. Management would consider these recommendations. Goal is to increase number and size of openings, data shows only increase in a few percentage points. But in the future, the people in charge of planning on the Forest will be present – responsible for making use of that information. Not totally clear what the trigger points will be. There's a commitment to figure out the process with management. How will Wildlife data fit in with that process? National Indicators – CFLR projects in the country will have to report in 1 year on progress on positive change in desired conditions within each CFLR. Group worked through list of desired conditions for our CFLR. The idea of desired conditions has been messy. But at the LR meeting the group agreed on 20 desired conditions, which shows progress. Hal said he doesn't think we should specify the wildlife conditions until the Wildlife team comes up with their conditions. They need the wildlife expertise. There's been input along the way, but the Wildlife team is charged with making those recommendations. National Indicators don't require that CFLR's report on Wildlife; but habitat metrics can be indicators. Rick said that's beyond the scope of our work. Lynne said that the LR team is struggling with the National Indicators and Hal is willing to say "we don't know." Jenny said the National Indicators will be an ongoing topic at the LR meetings. Lynne said she and Rick will try to take part in the LR meetings to provide a voice at that table. Rick said a place for that is the GTR that Rob Addington is developing. Casey pointed out that National Indicators are very general; but what we're charged with is much more of a real product; that will inform how they answer that question. Gali explained that Hal and Sara need to collect how happy we are. It was agreed that it's not quantifiable.

- The group went through the outline document that Rick presented.
- 3.2 detailed recap of the whole process. Challenges, etc.
- 3.3 covers primary species we are recommending, with a brief description of why things were taken out. More detailed rationale will be in the appendix. For primary species, we need to capture what makes them primary. Envirograms will be helpful when possible.
- 4.0 Wildlife monitoring – not too academic.
- 4.1 Important to have population parameters. Steve asked if we want to touch on only the parameters that we want to evaluate, or all others that we may not be using. Rick said this will be more comprehensive, and then in approaches will be more specific to what we will use.
- 4.2 scale – rationale on why certain things will make more sense than others.
 - 1) Gali mentioned that the LR team also mentioned changing the landscape scale.
 - 2) Jenny asked if the CFLRP+ scale covers untreated portions. Yes Rick said. Jenny thinks that will be a key point to emphasize, so that we have control areas.
- 4.3 Habitat as surrogates – important for us to describe that; why and why not.
- 4.4 sampling approaches – setting the stage for why we make certain recommendations.
- 5.0 Hypothesized population responses – Rick said it's okay that we may not know the answers.
- 5.1 conceptual landscape trajectories. Hypothesis of what will happen in these different landscape trajectories.

- 6.2 field sampling considerations. Per unit cost. That team needs to do some cost inflation predictions. Will come with section 4. Mockup GIS exercise. Look at 5 year plans and make some recommendations on where that will happen. Capture how choice of design may affect cost. Steve thinks it's important to have how many of our sampling units take place near treatment units (roads). There may be more to this section that needs to be flushed out.
- 7.0 - Our recommendations.
- Lynne brought up that we have 13 primary species. How in depth are we going to get? Rick said we will do all 13, maybe some in pilot, etc. Rick thinks some will fall off because of cost. Then we group some like birds that will use the same techniques. 5 are not birds. Rick said a challenge with a pilot is there are panel designs (space over time). Some are monitored every other year, etc. So pilot year may be more expensive.
- Jenny asked if we will recommend one integrated approach for these species that all of these should be monitored in a certain way. Start small and scale up. Monitor all of them, keep plan on the table all the time. Not just pick a few that are best or most cost effective. Lynne doesn't think they'll go for all 13; if we give them the option to pick they will pick easiest/cheapest; make recommendations but give feedback. Gali said we discussed that we will give them a menu of different approaches based on budget. Rick said give them different levels but with realization that if they only do 1/3 then the inference will be not as strong.
- Rick described that a lot of the information is out there, with different levels of details; we have to weave it into something clear. For sections 1-4, a lot of the content has been discussed and captured. *Section 5 – December meeting. Sections 6-7 will take a lot of work.
- Rick asked what is missing from the contents. Any glaring omissions?
- Steve thought maybe he could frontload his time between now and February. Steve asked how much can we divide and conquer. The development of that material is reliant on everyone. Rick and Lynne will develop the basic structure. Each person will contribute some; Terra can help with consistency. Felix said he doesn't have a lot of time for writing. But for implementation; Lynne can task the Implementation team; Lynne can focus more time on the writing. Rick said he will start making bullets etc. And then he can hand it off.
- Jenny asked if we can delegate some of the less complex tasks – i.e. describing the species selection process (Terra). Rick already has it written. 3.3 Lynne suggested divvying them up the way we got there. Then we can search for envirograms for each of the species. Take off Rick's plate. At this point we really don't have a lot of time (holidays, etc). We can even present an 80% document to LR team in February. Then we need to know how to recommend implementation. Then maybe in the Spring the Forest Service may put some money into this, so we have to know our recommendations. We can't sit back and wait.
- Lynne asked where the pilot monitoring may happen: on just one forest? Both? Jenny pointed out that the CSE monitoring done by the both forests, but the non-CSE is happening by the CFRI. Data analysis and – they are more flexible at hiring people, etc. Maybe they could help with the getting crews, hiring, etc. That relationship has been more firmed up. Rick says he doesn't think they are the right groups. Needs to be done with a contract group with good coordination from this group and Forest Service. CNHP and various groups we have master agreements with are more appropriate.
- Casey asked have we thought about the timeline of February as we haven't even truly come up with a recommendation. We still have a fair amount to discuss re: recommendations. How do we frame

that? How do we get there? Rick thinks we're closer than we think. Focused discussion on the approach. Design team thinks about that. We may need additional meetings. Lynne suggested smaller group meetings. One focused on the implementation table. Jenny thinks that would work well if we can prepare written sections for the subgroups, then have an interim meeting to cut and paste text to modify it.

- Jenny asked about the Forest Service Multiple Species Inventory Monitoring Technical Guide. Lynne said Implementation team will scour those protocols – of course that one and also RMBO and integrated bird monitoring – they combine it and put it into the spreadsheet. Suggested Implementation team has a separate work day between now and 12/17 and spend a concentrated effort on that. Casey, Lynne, and Felix will have a conference call to divvy up tasks. Jenny can pull that information together for the squirrels. Or is time better spent with science team? But she will be more valuable on design, and write up. She has notes and practical field comments from a crew tracking squirrels. Jenny will send that to the implementation group.
- Implementation team's spreadsheet has population parameters. Felix did some work on it. Rick reminded that we want different methods (based on cost). Casey explained that we have those different monitoring types.
- Transportation cost? Do we include? Felix has some in the chart. Cost for the personnel to travel, etc. Rate per mile formula is what Felix is using. I.e. \$20/day for gas. Do we do ranges? Rick says focus on field logistics versus planning. Felix brought up that some monitoring (acoustic) is limited by time. Jenny asked if we break out training cost. Some may require a crew to be trained. Rick agreed to add startup time and cost. Materials are included. Felix reminded us that a lot of this can be refined. Casey said we grouped a lot of this. I.e., an \$850-1000 grid. We can break it down, but Rick said we don't need that level of detail. Felix thought about skill level. GS5, minimum GS7 with bats. He thought about our Org chart on the Forest, these will be seasonal employees. Unless we can get CNH people. If they are seasonal employees, not much time. Lynne things contracting it out is best option, but it's not our decision to make. But we can make that recommendation.
- How many sampling grids are there? Casey thought we may need a cost per grid. Gali asked how we show the pros and cost for each of the different options? Casey explained that gets into the monitoring recommendations. It will explain it in sections 6 and 7. Steve thought those will need to be dovetailed. Will need to know the cost. Felix asked about contractor costs. We may have to come up with an estimate if we don't have the data from a contractor. Lynne says we get as much information as we can to get a reasonable cost of the different methods and scales and get feedback. Rick said we can't go to competitive bidders quite yet.
- SECTION 6: How do we make changes collectively? Several ideas were discussed including a Google site, the website, or different color fonts. Decided that Felix will add tabs at the bottom of the Implementation document and at the end we will put it all together. This will ensure that no data is lost. Jenny will do squirrels and porcupines, Felix bats, Janelle beetles, Lynne owls and hawks, Casey birds. Steve will provide review.
- Casey asks how will this table turn into our work? We need a meeting to present this data, and to send Janelle into the GIS work. Rick said we can have the discussion now and look at it at the next meeting. Have 2 strata (treated, non-treated) plan over every 2 or 3 years – each year something's being treated. Our recommendation is multiple taxa over the timeframe. Cost/benefits over the landscape using a spatially balanced sampling approach with one square kilometer grid cells. The

method was discussed as far as detail and cost; we recommend something in the middle. Jenny asked if we walk people through the methods tradeoffs? Is that part of the downscaling that we present? Rick suggested we make as many decisions upfront as we can. Similar to culling species, we cull methods. Jenny said we flesh them in the table but in the narrative. We collectively have enough sense to make these recommendations. Lynne said they could keep coming back to the question of what are we really monitoring? How our CFLR treatments are effecting wildlife? Rick said we could build a good narrative case on why these are good metrics. Jenny thinks it's good to go through the methods to be thorough.

- Jenny attended a Region 2 and 3 CFLR workshop last month. Updates on monitoring were included. Most large CFLR groups have annual stakeholder meetings, where monitoring data is presented, and stakeholders give input on what is useful and what is missing. It's possible someday stakeholders could include university people, and for them this data would be useful and they could possibly bear the cost of these methods. If we have this documented, maybe someday that information could be used. Rick said we could start that ball rolling with recommendations. "Opportunities for future partnerships." With a caveat that these are estimates based on the time/place. Would be nice if counties could participate in cost, etc. Casey thought if there was a recommendation, there are avenues and money for going after these. The state has a species conservation trust fund that this could align with, but we need to get to those recommendations first.

3) Moving forward/assignments/break outs/report outs

- a) 3.0 Identifying species – in addition to finding envirograms, write up one paragraph to explain why we're including these species.
- Casey filled out his.
 - Terra to send Lynne the species rationale that's been done.
 - Janelle needs to flush out the beetle justification; Jenny thought there may be some info out there.
 - Gali asked if we can add all this into the document at the December meeting. Rick said we need to develop it. We should aim to have that done in December. Steve asked if we would divide these sections up. Rick needs to frame it more first. Lynne suggested that Rick assign out some of these sections.
 - Lynne and Terra set a date for next week to get the species rational done.
- b) Calendars and work schedules:
- 1) Felix off Thanksgiving week, Dec 21 – Jan 8; Dec 16
 - 2) Jenny off Nov 28-29, and Jan 3
 - 3) Steve off Nov 28-29, early December, week of Christmas 23-27
 - 4) Janelle off Nov 28,29, missing next Wildlife meeting, she'll be out week of Dec 16; Dec 25-Jan 1
 - 5) Casey out Nov 28-29; Dec 23-Jan 3
 - 6) Rick – Nov 27-29; Dec 26-27
- Casey wondered if by December we can delegate some of these sections.
 - Casey suggested we switch next work group meeting December 10. But we also keep our scheduled December 17 meeting. What will we be doing at the December 17 meeting? Justification would be done before that. We would flush out the table. Felix and Janelle can't make it December 17.
- c) Rick – diagram (see picture) – variety of options (1-5 below is core framework)

- 1) Spatial extent CFLRP+ (20,000+ acres we think) not sure if we want spatial replication of this. Or will we do case studies?
- 2) Metrics
 - Survival, fecundity, etc – No, assume cost prohibitive.
 - Occupancy, density – Good, yes pursue this – appropriate metrics. Core metrics for framework.
 - Observation, sign only - low end – No. sign maybe
- 3) Taxa:
 - Pilot year (1) birds (RMBO), Nogo, Flam, tree squirrels – 1 or 2 locations. Sample core groups. All primary species, may suggest later dropping some. Probably pilot – one location or two (one in each forest).
 - Rick suggest dropping bats. Steve suggested we talk to bat experts. We talked about that. Casey had rough costs. Kirk Novo (Felix talk to). Casey said we’ve been doing acoustic monitoring of bats. It’s expensive. PSICC has some equipment. Takes expert to analyze. Rick said the metric you get out of that work – acoustic surveys – what does it mean? You get occupancy, but it’s hard to get density. You get activity levels. What about sharing equipment, like some agencies do with mammal traps. Rick said with startup costs – I.e. if you need \$1000 per than it could get pretty expensive.
 - Thereafter:
 - Annual - RMBO birds
 - NOGO and Flam – even years
 - Tree squirrels – odd years
 - OR
 - All every year for “normal” field season
- 4) Sample unit – 1 km² grid; densified as needed per protocol/taxa/variability
- 5) Sample design – spatially balanced (GRTS), 2 strata (“treated,” untreated). Consider additional strata based on system variability. Jenny asked if it makes sense to do pre-treatment. Rick said inherently it does get some of that. Could be outside the scope for February. Steve thought that 2 strata could work – or could get us in trouble. What about fire, etc? There is going to be other “noise.” Rick says we will be averaging out some of that noise. When we look at the justification on the species, we need to look at those different variations.
- 6) Below is design makers decision space, increment tolerance
- 7) Cost/benefit logic: sampling intensity

#Sampling unit/ Strata	~Cost	level of Inference
10	X	Weak
20		
50		Palatable x (Or recommendation after pilot year do power analysis or similar?)
100		

150		
200		Powerful

- Steve likes the pilot concept. Lynne asked if they expect a cost/benefit analysis. Gali says yes they want a menu and they want to know what they lose if they choose “cheap.”
- Jenny asked about the sample plots. Are the treatment sampling areas adjacent or separate? Do we break them up? Rick said if this really is going to be a 10-year thing, we need to not overthink what is treated; things happen, like fire. Casey asked about each plot, if a bit of it has been treated, do we consider it treated? Rick said that could be any kinds of treatments. Rick said we would have a rule set. Lynne asked if that would be part of the document. Rick said it’s not a big task.
- Jenny asked about where our 1 sq kilometer grids will be assigned? Rick said the grids are identified treated and untreated. The algorithm is efficient. We could do a systematic approach from a grid if we want, and hope we get spatial representation. Steve said with distance sampling these are what everyone is using and if not you need to be able to defend why. Rick said we have come far enough that the spatially balanced samplings are robust.
- Also what if there is a “High Park” that goes through all of this. Steve asked do we offer a “Plan B.” Rick said we can mention it, but if the overall objective is to move toward a regime where there are less High Parks, then continue sampling because your treatments failed. Lynne hypothesized if Plan A burned, they aren’t going to treat it, so if we had information on their treatment schedule, we could use that to infer our Plan B. Casey agrees that if it burns, we keep sampling, because it will help us speak to how wildlife responds to uncharacteristically large wildfire.
- Each “dot” that we select, are sampled during every sample iteration. We then lose important data. That is vital for occupancy metrics. Rick also said panel designs to consider. This is laid over the strata design. So there are 200 sites in the treated strata, rotate ever 5 years, year 1 sample annual panel, and then 2.
- We need pilot year to do the analysis than we add a supplemental to the report with our recommendations, with more refined sampling. Rick doesn’t think the data is out there right now to make recommendations. If they are then we can give that in February.
- Steve asked about sampling birds every other year rather than every year. Would we get the same type of data? Rick thought with some of them you will not get enough. Lynne thought we have RMBO monitor on an annual basis, then some supplemental data.
- Jenny brought up when some of these areas were treated. Are we going to consider how long since these areas were treated? Rick thought that’s all about covariants. “Treated” is anything that was CFLR prescribed.
- Casey asked if we drop bats and porcupines, do we fill those out in the Implementation table. We are not doing cost estimates for population? Lynne said the table would include everything, the full suite.

4) Jenny Wildlife Use Data – input from team outside of WWT meetings

a) Jenny went over her needs for input and will describe them more thoroughly in an email to the team.

5) Calendar, work plan, and next steps

a) Working team meeting – Lynne please fill in details when this is firmed up.

b) December 17 meeting Gali has to leave early by 1. We will be at the RO. We will start at 9:30.