



Notes from the Sierra Nevada Adaptive Management Project Fisher Integration Meeting

July 31, 2014, 9am to 4:00pm, UC Calif. Merced building, 550 E. Shaw, Fresno
Inyo/Kern room, Webcast at: <https://uc-d.adobeconnect.com/fisherit2014/>

In Attendance:

Matt Bissell- Forester
Sarah Boogay – CA Dept. Fish & Wildlife
Sue Britting – Sierra Forest Legacy
John Buckley – Central Sierra Environmental Resource Center (CSERC)
Bob Carey – US Fish & Wildlife
Jeff Cordes – USFS, Sequoia Natl Forest
Christina Daborcy – Tule River Tribe
Travis Espinoza – Yosemite National Park
Laura Finley – US Fish & Wildlife
Patricia Flebbe – US Forest Service
Rick Fleming – High Sierra Vol. Trail Crew
Pam Flick – Defenders of Wildlife
Shannon Forshes – USFS PSW Research
Andy Gordus – CA Dept. Fish & Wildlife
Margarita Gordus – CA Dept. Fish & Wildlife
Lisa Gymer – CA Dept. Fish & Wildlife
Jeannie Habben – Chowchilla/Fresno Watershed Councils
Peter Hopkinson – UC Berkeley
Kathie Jermstad – USFS PSW Research
Jenny Johnson – Natl. Resource Cons. Serv.
Isaac Kelsey – USFS PSW Research
Susie Kocher – UC Cooperative Extension

Tim Kroeker – CA Dept. Fish & Wildlife
Emilie Lang - USFS
Anne Lombardo – UC Cooperative Ext.
Theresa Lowe – USFS, Sierra NF
Becky McIntire – National Wildlife Fed.
Marc Meyer - USFS
Lindsey Myers - CSERC
Kathryn Purcell – USFS PSW Research
Brian Rueger – Tule River Tribe
Alexandra Reyes – USFS, Sierra NF
Sarah Rutherford – Regional Water Board
Tom Sandeli - CalFire
Sarah Sawyer – USFS, Region 5
Greg Schroer – USFS, Sierra NF
Mark Smith – US Forest Service Retired
Tessa Smith - USFS PSW Research
Wayne Spencer – Conservation Biology Institute
Kerri Vera – Tule River Tribe
Craig Thompson – USFS PSW Research
Laura Van Vranken – USFS PSW Research

Link to the agenda: <http://snamp.cnr.berkeley.edu/documents/599/> . Recordings of the webcast are available at the links below. PowerPoint presentations for each speaker can be downloaded with the button below the webcasting screen.

1. Welcome and overview: <http://snamp.cnr.berkeley.edu/documents/612/>

2. **Sugar Pine fisher** project update: <http://snamp.cnr.berkeley.edu/documents/614/>
3. **Kings River Fisher** Project update: <http://snamp.cnr.berkeley.edu/documents/613/>
4. **Multi Carnivore** update: <http://snamp.cnr.berkeley.edu/documents/615/>
5. **SNAMP Update & Final Report Chapter:**
<http://snamp.cnr.berkeley.edu/documents/616/>
6. **Models and Metrics:** <http://snamp.cnr.berkeley.edu/documents/617/>
7. **Integration Model:** <http://snamp.cnr.berkeley.edu/documents/618/>
8. **Rodenticide Poisoning:** <http://snamp.cnr.berkeley.edu/documents/619/>

1. Welcome and Overview – Anne Lombardo from SNAMP’s Public Participation Team welcomed the group, covered logistics, ground rules and the agenda and then had everyone introduce themselves. Susie Kocher gave a brief review of the Sierra Nevada Adaptive Management Project. Anne and Susie co-facilitated the meeting. The meeting was webcast and recorded, note the links above.

Goals of the meeting were to put SNAMP research efforts into context with additional ongoing fisher research efforts, share details and seek input on the final SNAMP report, share the team’s modeling work, facilitate discussion of integration metrics for the SNAMP final report and rodenticide poisoning issues facing fisher.

Susie shared the update schedule for the SNAMP final report deadline. The UC Science Team decided on a call the day before that they could not meet the deadline of December 31st due to delays in modeling. The original schedule was ambitious and reflected all parts of the project being on schedule. Some delays with modeling and data analysis have piled up causing the team to decide they could not meet the deadline. They are currently considering wrapping up the final report by May 31st, 2015.

II. Update on Fisher Research Efforts:

Sugar Pine Fisher Project: Tessa Smith, project leader, gave a brief update on the project’s field work. There currently have 4 technicians and 1 intern doing the survey work. They continue to focus on fisher survival, reproduction, dispersal and mortality post treatment using camera surveys, trapping and telemetry to find evidence of use, dens and mortalities. They have gathered over 1,400 telemetry locations this year, identified 15 dens and surveyed 142 camera grids. They are focusing on treated areas now, not the larger area previously covered by the SNAMP fisher project,. There are lots of problems with bears abusing cameras in the summer and fall so these surveys are most successful once they have gone off to hibernate. Both the Sugar Pine and SNAMP project have produced over a million camera images, with over 100,000 pictures of fisher, and over 30,000 telemetry locations in total.

The two projects have collared 110 different animals and collected 66 mortalities total with 56 necropsies being preformed. They continue to see evidence of **den reuse** and it was noted that

denning began two weeks early this year. There have been 3 mortalities so far this year, all in the spring. They are also trapping and removing collars from animals outside the key watershed. They have 3 fishers under collar, down from 8 due to mortalities and dropped collars.

The project's plane which once flew 6 days a week for SNAMP to capture telemetry locations and help recover mortalities, now flies 5 days a week with one day reserved for the Kings River project located south of the San Joaquin River. The plane was grounded for a month during the government shut down. It was also used to help rescue an elderly person lost in a Mariposa canyon recently! The plane provides the unique opportunity to provide some of the best dispersal data on fisher, as it can cover such a large area.

Question: What other data is coming from the cameras?

Answer: We are looking at prey presence/absence, density and predator's presence.

Question: When looking at prey density with cameras could there be a bias as a result of predator presence?

Answer:

Kings River Fisher Project: Kathryn Purcell from the US Forest Service's Pacific Southwest Research Station spoke about the Kings River fisher project (KRFP), a sister project to SNAMP with similar goals, being done at the Kings River Administrative Area. The project was started in 2007 just a few months earlier than SNAMP, to help fill the gaps in knowledge about the fisher. It originated out of funds from a lawsuit around the Big Creek fire. Using the same capture and biological sampling techniques, KRFP has used ground telemetry versus SNAMP's aerial telemetry to capture the movements of 114 fisher so far. They have identified 224 dens (natal and maternal), over three per female on average. They are characterizing denning, resting (over 900 locations) and mortality habitats. They have had 57 mortalities, with predation believed to be the primary cause. They have done 50 necropsies.

They have done **scat** surveys for 7 years, in the spring and fall, with 14 semi-annual surveys. So far. They have collected over 4800 scat samples. The dogs make three visits to each hexagon. They have found 114 fisher scats – 64 females and 50 males.

As a result of identifying denning and resting sites they have produced a helpful guide titled "**A Photographic Field Guide to Fisher Rest and Den Sites in the Sierra National Forest**". It is being tested with tree marking crews now as a way to help identify the important structures to preserve on the landscape. You can find it at:

<https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxzc25maXN oZXJ3Z3xneDozMDDlZmJiZTI5Njg5MTYy>

They monitored den trees for effects of **prescribed fire** on fisher in the High Sierra Ranger District. Inside dens, temperature showed little variation during fires and although carbon monoxide increases were found to be under dangerous levels, there is the possibility that CO levels are hard on neonates.

The project will go through 2018 with funding from Region 5. They are working to help design fuel treatments with the Dinkey Collaborative project and are looking at the cumulative effects of the spacing and timing of treatments on fisher.

Question: How do you get copy of resting and den site field guide?

Answer: Ask any of the PSW people. Or see link above.

The Stirling Fisher Translocation Project: This is another fisher project on Sierra Pacific Industry (SPI) land up north near Chico. SPI introduced 40 fisher to the area between 2011 and 2014. These were taken from the wild in a variety of locations to reduce the impact in any one area. They have a 78% reproduction rate and have had 52 kits born so far.

Kings River Multi Carnivores Project: Craig Thompson presented work that he and Greta Wengert have been doing at Kings River trapping, collaring and monitoring two mountain lions and six bobcats. Predators are the fisher's largest cause of death (60-70%) providing the motivation for this study to identify shared habitat preferences of all three species. Mountain lion have been found to eat male fisher more often while bobcats tend to eat females.

Mountain lions and bobcats, with their larger weights, can carry bigger batteries and collars allowing researchers to get better spatial/movement data. Satellite telemetry can provide locations of the animals every two hours. This allows identification of resting and kill sites where scat can be collected and tested for evidence of exposure to the anticoagulants rodenticides (ARs). This chemical evidence can be found for five to seven days after exposure. Overlaid with locations of known marijuana grow sites (past and present) this information can help to develop a model that shows the risk of exposure to rodenticides, used in the grows. Necropsy efforts try to differentiate between predation and scavenging damage. Hemorrhage evidence can be used as it occurs at time of death but not afterwards and defensive wounds are noted as well as claws substrate.

Before the scat method was developed, testing for exposure to AR's could only be done with the liver tissue of dead animals. So far the study has had only one bobcat mortality from roadkill. How much fisher predation is underlain by rodenticide poisonings and ill health is still unknown.

There is some evidence of predation on fisher taking place on habitat edges. Long linear edges similar to treatment edges seem to be an area where hunting is focused. The research team wants

to know more about the shared habitat preferences of the predator/ prey relationship to understand how changes in forest structure affect interguild predation.

Question: With frequent fires in the past there would have been more openings, so how can openings be the issue for fisher?

Answer: Frequent fires produce a much patchier landscape, not the long linear edges typical of management activity.

Question: Could it be about the lion or bobcat density? Lions have been protected for years now, could their numbers as a predator be out of balance?

Answer: We are not sure yet.

Question: Is there data on the predation rates of other fisher populations?

Answer: There was a case in the literature on fisher depredation, but it was from before the genetic evidence was available and before these studies.

Question: How many lions do you want to collar?

Answer: 8 to 12

Question: Have you seen any mortality?

Answer: One bobcat was killed on a road.

Question: Earlier forests were more open. How would forest management actions now, which are supposed to be similar to that forest structure, be apparently bad for fisher?

Answer: That's what we're trying to understand. Fires produce a patchier landscape, where openings aren't necessarily connected. They do not always produce long edges and travel corridors for larger predators the way mechanical treatments might.

Question: Could treated areas have more prey and are therefore followed by more predators?

Answer: Very possible, but this may be causing more conflict between predator species.

Question: What proportion of fisher carcasses is consumed? If fisher aren't actually prey items, why do bobcats hang out at den trees as though waiting to catch them?

Answer: There is some eating. Predators are opportunistic and good at finding opportunities. They will come back to an opportunity if they find it but can't access prey. Some individual predators may learn to hunt fisher, but in general fisher are too rare to be a prey item for bigger predators.

Question: Interactions with other fisher – can these cause mortality?

Answer: Yes, intraspecific conflict may cause death. There may be one death in SNAMP that was intraspecific. It does occur according to literature.

Summary of SNAMP's Fisher Project and the Final Report: The SNAMP final report on fisher will include seven chapters: Reproduction, Survival/Mortalities, Dispersal, Home Range Dynamics, Population Growth Rates and Focused Areas of Research.

Reproduction: SNAMP collared 110 fisher and monitored 93 during the breeding season, during which time 76 females denned producing 64 weaned kits. Denning began on March 28th, 2014 for SNAMP fisher and March 29th, 2014 at KRFP. The mom and kit(s) are usually away from the den by June 9th, give or take a week. Fishers produce kits when they are three to five years of age and about 80% den consistently, producing about 1.5 kits each. The oldest known female has been about 12 or 13, but seven to nine years is considered a more natural life span. Females typically live longer than males. Females appear to be choosing bigger, larger (40 inch in diameter) trees with cavities in forested areas with canopy cover over 60%. Females show a preference for black oak for denning and somewhat less for resting, depending on the weather and season. An analysis of den trees by SNAMP's Lidar Team showed that clusters of large trees with vertical heterogeneity were important for habitat.

Survival: Calculations for lambda, a measure of population stability, were shared, ranging from 0.87 to 1.04 over six years, running above 1.0 for three of those years. In addition lambda is over 1.0 for three of the five 2-year estimates but is 0.9 on average for the 7 years of SNAMP, which represents a frail population. Observation of actual density suggests a population that is more stable than lambda would suggest. Canine distemper came through the population at the time and may be the cause of the temporary decline.

Dispersal: For dispersal the team used a combination of field data (with at least 25 pre-dispersal locations) and genetic data. On average males dispersed about 5.5 to over 8 miles and females closer to 4 to 5.5 miles by the path of least resistance. The longest male dispersal seen was over 15 miles. Two males have crossed the San Joaquin River gorge. California has much smaller dispersal rates than those found in studies elsewhere in the US. Dispersal seems to happen in February locally, and a bit earlier, during the winter, up north. In terms of a conservation strategy, if only males cross out of their area it won't help establish a new area/ population. Genetic evidence is clear that male dispersal is much farther than females. There is a lot of individual variation between fisher dispersals that will continue to be tracked.

Home Ranges: The female home range does not increase much beyond the sub-adult age, unlike the male whose home range continues to grow from juvenile to adulthood life stages. Female home ranges were estimated at 12 to 15 square miles; males at 21 to 52 square miles. Core habitat use areas were smaller, in the range of 4 to 5.5 square miles for females and 7.5 to 19 for males.

Female home ranges decrease with denning and early kit raising. Male home ranges increase late in winter / early spring during mating season. Male fishers seem to have about four times the home range area as females, depending on season.

Population Growth Rates: Demographics and modeled population dynamics were shared to discuss density figures which range from 0.07 to 0.09 per square kilometer. The team estimates that there are 48 to 62 fisher in the SNAMP area, extrapolated to 80 to 107 in Core Area #5.

Some side topics for future focused research to emerge from SNAMP were shared:

- A highway culvert monitoring project along Hwy 41 related to roadkill,
- A study of marten/fisher elevational separation/ relationship using photographic evidence,
- The utility of fisher identification by camera without the need to trap, and
- A study of fisher activity cycles.

Integration Metrics/Management Indicators: Craig Thompson gave an overview of the SNAMP integration metrics that will be produced for the integration portion of the SNAMP final report. These will all be reported at the scale of the key watershed or fireshed to match the scale being used by the other research teams.

Occupancy: This number is obtained by camera based surveys.

Survival: This is the number of resident females and males in the study area. It is about 1 to 3 males and 4 to 6 females on average. It is obtained by aerial telemetry.

Reproduction/ survival of resident females: This number is obtained by carcass recovery and necropsy.

Question: Is roadkill on Highway 41 still a major cause of death in the fisher population, especially in Yosemite National Park?

Answer: Yes. However, two roadkill deaths have recently been re-attributed to rodenticide poisoning. A vehicle collision group is working with culvert cameras and wildlife trays on Highway 41 into the park.

Question: Why is dispersal of fisher aligned mostly from the northwest to the southeast? Why not towards the northeast and the park?

Answer: Dispersal follows habitat distribution. The fisher band is narrow and easily disconnected. It follows an elevational contour across the mountains.

Question: Do these mortality causes reflect a natural scenario?

Answer: Yes, but predation, roadkill and starvation may be influenced by other factors like rodenticide.

Question: Can you tease out whether the absence of fisher associated with treatments is related to equipment and noise or to change in structure/habitat?

Answer: Possibly. If fishers respond only to the immediate disturbance, then they should return to the area quickly once the treatment is completed. If they stay absent, we can assume some important change in resources or habitat occurred.

III. SNAMP Fisher Models and Integration Metrics:

Craig Thompson discussed the emerging models and the metrics they are built around.

Reproductive Habitat Model: A denning habitat model was developed by the Conservation Biology Institute based on 358 den site locations which includes canopy cover, tree size, cover type, topography, water and climate. In a place with lots of dense canopy some intermix of hardwoods is good, although use by fishers does drop off at the highest concentrations of black oaks. The residency and survival of adult denning females during denning season is considered a critical variable.

Intensity of Use Model: James Garner from KRFP tested several models with aerial telemetry data to see which best quantified fisher use of forest structure. The team has 31,000 location data points for 110 animals spread over 90 square kilometers. He found one model to stand out. Hardwoods stand out as important, as well as snags and a decrease in dense young conifers.

Dynamic Occupancy Model: Craig shared models being developed by Dr. Rick Sweitzer, the team's previous project leader, in his work for an upcoming paper. "Response of Fishers to Forest Management: Multi-season surveys". It analyzes the presence and absence of fisher in treated and non-treated areas using SNAMP camera grid surveys over a six year period and USFS FACTs geospatial data to quantify occupancy, persistence (survival/lambda), and colonization (dispersal).

The results presented were draft as the work is still in progress. Rick found that initial occupancy was high and most persisted post treatment. Local habitat use (occupancy) and persistence was highest in areas with high canopy cover (CWHR class M and D which represents canopy cover 40% and higher). Persistence was lowest in areas with hazardous fuels reduction treatments (mastication and fine fuel reduction). Logging and understory management did not have a significant effect.

The model suggests that the effects of hazardous fuel reduction, logging and understory management is negative to insignificant to fisher. A caveat is that reduced cover may affect fisher indirectly by reducing prey and increasing the risk of predation.

Summary: Craig then gave a summary of variables found important across all three models. Those that had the greatest effect were tree basal area, canopy cover, hardwoods, snag biomass and a decrease in conifers (dense young conifers in the understory).

Question: Is snag biomass important because of denning cavities?

Answer: Yes, though it is also important for resting site. This may be related to prey availability.

Question: Do hazardous fuels removal decrease prey and / or decrease cover and security?

Answer:

Question: Any thought about using the GNN vegetation layer instead of EVEG? There might be better parallels/consistencies. GNN has more variety than EVEG.

Answer:

Suggestion: Have Rick get in touch with Joe Sherlock for how data is entered and categorize.

Question: What is the variability of denning dates?

Answer: The start of denning seems to vary by about a week. The ending date is more variable. This year appears to be different though perhaps dates are being affected by the drought.

Fisher Conservation Strategy: Dr. Wayne Spencer from the Conservation Biology Institute spoke about his involvement in fisher conservation efforts. The fisher is currently under consideration for listing as threatened or endangered with both the federal and state governments with a decision expected in fall 2014. There is a West Coast Fisher Conservation Strategy. The Southern Sierra National Forests are working on a more local Southern Sierra Nevada Fisher Conservation Assessment and Strategy.

Wayne reviewed their desired conditions, guiding principles, goals and objectives and available models. The balance for the fisher between the threat of wildfire and vegetation treatments to reduce fire is a complex one. Movement areas between population cores are important. A previous focus on foraging, resting and denning habitat has shifted to a simpler integrative metric or “live-in” habitat category known as the “female home range template” which is about 13 acres. This template is overlaid on core and linkage areas, identifying areas where management efforts, both spatial and temporal, should be considered with the help of a decision support system. The goal is to set population targets in core areas, manage for them, monitor and adapt when needed.

The development of decision support tools at multiple scales was discussed, including the landscape, home range, sub home range and microsite scales. They are looking for managers to help with the last two, leaving the first two to the fisher technical team. They are developing a

landscape fisher habitat model using connectivity models with least-cost corridors, resting, denning and foraging habitat.

Fishers are expected to tolerate treatment in their home ranges of about 2.6% per year, up to 13% over 5 years. The goal is to maintain connectivity and no net loss of suitable breeding home ranges over time. Unsuitable habitat hexagons would have more freedom to be treated as a restoration zone.

III. Fire& Fuel Management Impacts

SNAMP researchers including Dr. Craig Thompson of the Fisher Team and Dr. Zach Peery of the Owl Team have not yet been able to analyze fire and fuel management effects on fisher because the fire modeling of the Sugar Pine treatment area has not yet been completed by the Fire Team. The SNAMP final report integration chapter will include analysis of treatment effects using data from 2012 and 2013 after the thinning was completed. However, additional post treatment data continues to be collected by the USFS PSW Sugar Pine project so additional inference will be able to be made at a later date.

Question: How many post treatment years do you have?

Answer: None, we are not done analyzing 2013 yet and they are still gathering 2014's data.

V. Fisher Rodenticide Poisoning:

Craig Thompson explained that rodenticide effects on fisher were first discovered through necropsy of the carcass of SNAMP M13 (male 13) found dead and intact in 2009. The analysis showed that M13 bled to death internally due to exposure to two different anticoagulants found in rodenticide (ARs), with brodifacoum leading the list. This caused the SNAMP Fisher Team to do further testing of stored liver samples from previous mortalities, leading to the finding in 2013 that 80% of testable carcasses had been exposed to ARs. F25 (female 25), previously classified as a roadkill, was reclassified as a death from three different AR's compounds. Poisons are known to be transferable to kits through the placenta and milk and predators will accumulate the poisons from the prey they eat.

Since then, three additional SNAMP fisher were found to have died from AR exposure; M40 in February 2013 tested positive for two ARs; M45 in April 2013 tested positive for three ARs; and M07, previously classified as roadkill, was reclassified as a death from AR's poisonings. By 2014, SNAMP exposure rates rose to over 90%. There have been five confirmed deaths and two more suspected.

On the KRFP site there have also been rodenticide deaths. F60 was found dead and intact near a grow site and preliminary evidence suggested AR exposure. At the Hoopa Tribal Fisher project, hotdogs laced with Methomyl were found strung on hooks around an illegal grow site up. A dead fisher found near the site had the pesticide-laced hotdog in its throat and stomach.. The state wide total of confirmed fisher deaths due to rodenticide has reached 14.

Poisonings have mostly been detected in the spring. This may be because of illegal marijuana grow sites in the forest. 103 grow sites were identified between 2002 and 2012 in the SNAMP fisher research territory alone. Greta Wengert from the Integral Ecological Research Center is working on mapping of high risk areas for several Threatened & Endangered species. The California Department of Fish & Wildlife has a volunteer program to submit bear livers samples to test for AR's. There is money for water testing from the Regional Water Board. The National Humane Society may have wildlife protection money. Testing of the marijuana to look for chemical traces that could affect humans has not been done.

Question: Are ARs found in deer, bear, squirrels, turkey, and spotted owls?

Answer: These species have not been tested in the southern Sierras. In Northern CA, barred owls have been found to be contaminated.

Questions: Are hot dogs actually targeting carnivores?

Answer: Yes. They are intended to keep scavenging animals out of the camp site.

Question: Did affected fishers eat the poisoned bait, or did they eat the rodents that were exposed to rodenticide?

Answer: Both.

Question: Are you trying to get more game wardens?

Answer: Not our decision.

Question: Are 215s legal?

Answer: yes

Andy Gordus - California Department of Fish & Game: Andy spoke to the group about his introduction to this problem with DDT detections in tests on water flowing in coastal mountains. Andy travels to speak to groups with information on the environmental devastation caused by illegal grow sites. He is hoping to get some water testing done during local site clean ups this fall in the Sierra National Forest. Contact info: Andy.Gordus@wildlife.ca.gov.

Rick Fleming - High Sierra Volunteer Trail Crew: Rick spoke on their efforts to clean up illegal grow sites in the forest starting in 2008. They have cleaned up hundreds of sites

throughout the forests of California since then; transporting trash, chemicals and irrigation pipe out by foot and helicopter. Contact info: <http://trailcrew.org/>

Question: Do you need more volunteers?

Answer: Always, see their site for more information.

Question: Do you have chapters in different parts of the state?

Answer: We have worked throughout the state and have trained some outside groups up north.

Question: Has anyone tested marijuana for rodenticide?

Answer: Not yet.

V. Evaluations and Next Steps: Action items and next steps were reviewed. Next steps discussed included:

- Power point presentations and notes will be posted to the SNAMP website.
- We will discuss SNAMP's integration chapter at our annual meeting, as well as the final fisher chapter.
- All SNAMP fisher fieldwork is done and there is only analysis being done now. The Sugar Pine Fisher Project has been continuation of the project by the Forest Service for 2 to 3 more years.
- SNAMP fisher information has and will continue to feed into the ongoing fisher conservation strategy discussions.

Action items included:

Action item: Anne will share the Photographic Resting Guide by Rebecca from the KREW project (See link above under the Kings River Update.)

Action item: Craig will speak with Rick about talking to Joe Sherlock on vegetation classification, for similarities purposes.

Action item: There should be more communication between groups dealing with: FS/County/HSVTC.

Action item: Anne will pass around the High Sierra Volunteer Trail Crew weblink to the group. See above.

Participants were asked what went well in the meeting and what could be done better.

Participants appreciated that the room temperature finally got warm enough, there was good sharing of information from a variety of contributors/collaborators. Presentation slides were well done and succinct. The meeting would have benefitted from coffee. Participants also filled out paper evaluation forms. Results are summarized below.

Evaluation summary:

