

Action Item Notes

Effectiveness Monitoring Committee Meeting

May 31, 2017

UC Cooperative Extension—Mendocino County Ukiah

1. Participants (16): Dr. Russ Henly (Co-Chair), Dr. Stacy Drury, Sal Chinnici, Bill Condon, Clarence Hostler, Drew Coe, Jim Burke, Bill Short, Matt Dias, Stacy Stanish, Mandy Culpepper, David Fowler, Dave Longstreth, Connor Pompa, Ken Spacek, and Pete Cafferata.

Webinar participants (2): Steve Baumgartner, Justin LaNier.

2. Report by the Co-Chair

- Russ Henly reported on the following topics:
 - Climate change: (1) a revised version of the ARB 2017 Climate Change Scoping Plan is expected to be available the week of June 5th (see: <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>); (2) the draft California Forest Carbon Plan was released on January 20th; a revised version reflecting public comments will be released during the summer of 2017.
 - AB 1492 updates: (1) the white paper being prepared by UC Berkeley for the Ecological Performance Measures Working Group is nearly finished; a final review draft is expected in two weeks; (2) the Campbell Creek Pilot Project Working Group met in Fort Bragg on May 23rd, with presentations on three assessment approaches for a small sub-watershed in the Campbell Creek planning watershed (THP review, rapid air photo assessment, and modeling), and a field tour; (3) one meeting has been held to date to address streamlining and synchronizing of multiple permit review and approval processes for THPs and other types of harvesting plans.

3. Update on EMC Membership

- Co-Chair Henly informed the group that EMC members Kevin Boston and Erin Kelly will not be renewing their positions, which expire July 1, 2017. A third previously vacant academic position is expected to be filled shortly. A request for academic position member applications has been posted on the BOF website: http://bofdata.fire.ca.gov/board_committees/effectiveness_monitoring_committee/_call_for_applicants/request_for_academic_applicants_may_2017_3_.pdf
- The EMC co-chair position will remain unfilled until a new BOF member is appointed.
- Justin LaNier has applied and is seeking appointment for the CVRWQCB position; his application will be considered for approval by the BOF at their June meeting. The SWRCB position remains open.

- Greg Giusti has applied and is seeking appointment to the EMC for an academia member position. Mr. Giusti has recently retired from the University of California-Lake County Cooperative Extension in Lakeport, CA as the Forest & Wildlands Ecology Advisor for Mendocino and Lake Counties.
- Matt House, Aquatic Biologist, Green Diamond Resource Company, is seeking a reappointment of his membership by the Board of Forestry & Fire Protection to the EMC. Mr. House's current term to the EMC expires July 1, 2017.
- Sal Chinnici, Forest Science Manager, Humboldt Redwood Company, is seeking a reappointment of his membership by the Board of Forestry & Fire Protection to the EMC. Mr. Chinnici's current term to the EMC expires July 1, 2017.
- **If EMC members and staff have suggestions to fill vacant EMC positions, please provide them to Russ Henly and Matt Dias.**

4. Updates on Contracting for Projects Approved for EMC Funding

- **EMC-2015-002 (FORPRIEM ver. 2.0.) and EMC-2015-004 (Effectiveness of Road Rules in Reducing Hydrologic Connectivity and Significant Sediment Discharge)—Statistical Consultation:** Pete Cafferata stated that the draft contract with the US Forest Service Pacific Northwest Research Station (PNW) for \$55,834.86 is nearing completion. PNW staff signed the contract on May 26th and it is being sent to CAL FIRE Deputy Director Eng for his signature the week of May 29th.
- **EMC-2015-001 (Class II-Large Monitoring):** Drew Coe reported that the Oregon State University Sponsored Programs office has requested small changes to the CAL FIRE Class II-L contract (e.g., terminology changes), and that they sent those changes to the CAL FIRE Business Services Office. After OSU signs the contract, it will be sent to Deputy Director Eng for his signature.

5. Review of Supplemental Material Submitted for EMC-2017-001 (UC Davis Caspar Creek Experimental Watersheds Nutrient Study)

- Pete Cafferata reviewed the brief plan requested by the EMC at the April meeting to address concerns regarding the UC Davis "Effects of Stand Density Reduction on Nutrient Cycling and Nutrient Transport at the Caspar Creek Experimental Watersheds" study (EMC-2017-001). Concerns raised included:
 - Conducting a post-harvest survey for the South Fork sub-watersheds included in the study to document the amount of soil disturbance.
 - Conducting a post-harvest survey for the South Fork sub-watersheds included in the study to document the amount of organic debris and sediment delivered to each of the channels.
 - Producing a stratification of the yarding methods used in the South Fork sub-watersheds included in the study to further quantify the amount of disturbance in basin.
 - Documenting the soil types present in the South Fork sub-watersheds included in the study using NRCS web soil survey (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>) SSURGO data; determine if significant background differences exist (e.g., soil chemistry) that could influence nutrient and sediment input to stream channels.

- The plan specifies rapid mapping of sediment “hotspots” (significant amounts of bare soil near stream channels), significant volumes of fine and coarse organic debris and sediment deposited in or near stream channels, and yarding boundaries with research grade GPS mapping, as well as PSW annual erosion surveys. It also specifies using NRCS website information to document soil type differences.
- The field work in the brief plan was included in the 2017-2018 Annual Caspar Creek Workplan approved by both the PSW and CAL FIRE (item 3.W).
- **The EMC requested a more detailed study plan addressing methods to be employed, particularly the minimum size of the areas to be mapped with the GPS unit, and additional details regarding the annual PSW erosion survey protocols.**
- The EMC agreed to final approval for the \$92,251.00 funding voted on at the April 2017 meeting.
- A contract with UC Davis has been produced for \$192,251 (\$100,000 provided by CAL FIRE), and it has been sent to the UC Davis Awards office for signature.

6. Review of Draft EMC Products and Funding Proposals

EMC-2016-003: Effectiveness of the Forest Practice Rules for Unstable Areas

- Member Coe reported on Mass Wasting Subcommittee work for this project, being led by Member O’Connor. Subcommittee staff assistance is being provided by Dave Longstreth, Dave Fowler, Mike Fuller, and Ronna Bowers.
- Subcommittee members have been assigned specific tasks, including determining methods to classify landforms (Bowers), and specifying how CGS classifies landslide features (Fuller). They are to report back to the sub-committee to provide information on how to best move forward.
- The primary approach envisioned remains development of a pilot study in the Caspar Creek watershed, evaluating LiDAR as a landslide detection tool. The initial proposal is to compare and contrast 2004 LiDAR and 2017 LiDAR landslide geomorphology within the South Fork and North Fork Caspar Creek watersheds, identifying landslides that occurred in between the two sets of LiDAR. This work is building off of Dave Longsteth’s South Fork Caspar Creek Landslide Study, part of the 10 sub-studies included in the Caspar Creek Third Experiment.
- A subcommittee meeting will be scheduled prior to the next EMC meeting.
- **No EMC funding request has been identified at this time. A refined project description will be supplied prior to the next EMC meeting.**

EMC-2017-XXX: Intensive Road Effectiveness Monitoring for the Third Experiment at Caspar Creek

- Drew Coe provided background information for this new project proposal. CAL FIRE has nearly completed a contract with Cal Poly’s Dr. Chris Surfleet to fund a study titled *“Evaluation of Hydrologic and Water Quality Changes Associated with Differing Silvicultural Treatments, Road Practices, and Riparian Buffer Strip Design Implemented under the California Forest Practice Rules using the Distributed Hydrology Soil Vegetation Model (DHSVM) at the Caspar Creek Experimental Watersheds (\$96,257).*
- Dr. Surfleet would like to collect road erosion field data that can be coupled with DHSVM modeling. This study would support DHSVM simulations and improve model performance.

DHSVM modeling combined with road storm sediment relationships will quantify surface erosion at road discharge points.

- Using a nested sampling approach in this heavily instrumented watershed can provide a link between discharge and sediment concentration from road segments and water quality conditions in the downstream direction. The nested biological portion of the third experiment (i.e., BMI and fish monitoring) can provide information about possible beneficial use impairment, allowing the EMC the potential to explicitly link road performance to water quality requirements.
- This project would complement EMC-2015-004 (Road Rules--Effectiveness of reducing hydrologic disconnection and road surface erosion), which is a broad, regional scale assessment of road hydrologic connectivity and erosion potential before-and-after road rule implementation to assess the effectiveness in achieving rule-mandated hydrologic disconnection and reduction of significant sediment discharges.
- A pilot project is proposed for the winter of 2017/18 to define a more precise methodology. The options for road sediment data collection include (1) grab samples at outlet of road flumes, (2) grab samples above and below watercourse crossings, (3) utilizing a catchment device in conjunction with the road flume (e.g. silt fence, silt sock, other), or (4) pumping sampler at a flume. The selected method(s) will be implemented more broadly during the winter of 2018/19 in the South Fork. This study would build on results from the pilot project
- Staffing remains the main limiting factor for this study. Funding for a CAL FIRE Forestry Aide may be required from the EMC.
- **The EMC expressed considerable interest in the project. A detailed project description is to be prepared prior to the next EMC meeting.**

EMC-2017-002 (Using Automated Bird Recorders to Determine Differences in Bird Occupancy of Four Habitat Types in a Post Fire Setting):

- Stacy Stanish provided a PowerPoint presentation (hardcopy only) describing work conducted to date for the post-fire bird occupancy study on Boggs Mountain Demonstration State Forest (BMDSF). This study is collecting baseline bird occurrence and diversity data for stands subjected to different disturbance and/or management treatments following wildfire, with the goal of determining if significant differences exist between treatments. Three replicates in four different stand types were initially planned (a 4th replicate was recently added):
 - Areas unburned by the 2015 Valley Fire.
 - High severity burned areas, but not salvage logged.
 - High severity burned areas that are salvage logged, but not planted or herbicide sprayed.
 - High severity burned areas that are salvage logged, ripped, planted, and sprayed.
- 12 digital bird recorders were deployed for 3 consecutive days (5 minutes before, at, and after sunrise) in late May. Control sites are located on BMDSF where the 2015 Valley Fire did not burn, and recorders were deployed for the fourth replicates on May 31st. Photos were taken in each cardinal direction at all of the field sites.
- Sample recordings were played for the EMC, with differences in bird species evident.

- EMC funding will be used to hire a biologist skilled in interpreting the recorded bird calls for three years. Less intense field sampling may occur at 5 years, 10 years, and longer timespans, but this component is not part of the current study.

UC Merced Project Proposal—Critical Baseline Monitoring of Water Quality for the Hemlock Forest Restoration Project

- **Russ Henly stated that he attempted to contact Dr. Martha Conklin and explain the EMC’s concerns regarding the project, but he has received no response to a voice mail and an email.**

7. Public Forum – None

8. Discussion of Location and Future Meeting Dates

- Future EMC meetings are tentatively scheduled for July 12th, August 8th, and September 22nd.
- A summer field meeting at the Caspar Creek watershed will be investigated, likely spanning parts of two days. This meeting is anticipated for September.
- **EMC members and staff were requested to consider appropriate themes to add to the EMC Strategic Plan and email ideas to Russ Henly and Matt Dias prior to the next meeting.**

9. Announcements

- Stacy Stanish is coordinating the CLFA fall workshop on water topics that is scheduled for September 8, 2017 in Chico. Dr. Roger Bales, UC Merced, is the keynote speaker addressing water yields in managed forests undergoing climate change.
- Drew Coe announced that Dr. Joe Wagenbrenner, PSW Research Hydrologist, and PSW visiting research scientists will be conducting rainfall simulations from June 8th through June 17th. The basic design is to look at compacted/uncompacted and slash/no slash conditions to see if it is possible to determine the relative impact of compaction and cover on rain splash and inter-rill runoff and sediment generation. Visitors are welcome to observe the study. Additionally, CAL FIRE’s Will Olsen is developing a study plan for the post-fire salvage logging BMP effectiveness study at BMDSF.
- Pete Cafferata announced that Dr. Steve Ostoja, Director of the USDA California Climate Hub, has organized a tree mortality/drought science and management symposium on July 25th at McClellan. Register at <https://drought-treemortality-symposium.eventbrite.com>