

Action Item Notes

Effectiveness Monitoring Committee Meeting

March 3, 2017

CAL FIRE Large Conference Room, Natural Resources Building
Sacramento

Participants (21): Dr. Russ Henly (Co-Chair), Dr. Kevin Boston, Dr. Stacy Drury, Tom Engstrom, Dr. Erin Kelly, Bill Condon, Matt House, Clarence Hostler, Drew Coe, René Leclerc, Dr. Matt O'Connor, Jim Burke, Bill Short, Matt Dias, Stacy Stanish, Mandy Culpepper, Steve Baumgartner, David Fowler, Eric Hedge, Eric Huff, and Pete Cafferata.

Webinar participants (3): Richard Gienger, Mike Fuller, and Anthony Toto.

1. Report by the Co-Chair

- Russ Henly reported on the following topics:
 - The BOF approved the revised EMC Strategic Plan at their January 25th meeting. It is posted on the EMC website:
http://bofdata.fire.ca.gov/board_committees/effectiveness_monitoring_committee_mission_goals/final_emc_monitoring_committee_strategic_plan_01_25_17.pdf
 - The draft California Forest Carbon Plan, released on January 20th, is posted on the FCAT website:
http://www.fire.ca.gov/fcat/downloads/California%20Forest%20Carbon%20Plan%20Draft%20for%20Public%20Review_Jan17.pdf
The public comment period is open until March 17th.
 - AB 1492 updates: (1) TRFR fund budget—CAL FIRE will be reestablishing seedling production in Davis at the LM Moran Center in 2018, (2) the Ecological Performance Measures Working Group draft white paper is expected to be available in late spring, (3) the Campbell Creek Pilot Project Interagency Interdisciplinary Team is developing a scope of work, and (4) the LiDAR contract flight for 1200 mi² in Mendocino County will occur soon.
 - **The call for 2017 EMC project proposals needs to be widely distributed and posted.**

2. Update on EMC Membership

- Dr. Stacy Drury, USFS PSW Research Fire Ecologist in Redding, is a new EMC member.
- No progress has been made filling the university affiliation membership position. Dr. Catherine Brinkley, Environmental Planning, Public Health, Food Systems, Rural-Urban Linkages, UC Davis, may be a possible candidate for the position.
- René Leclerc, Regional Water Board member, announced that this was his last meeting, since he is taking a position with the San Francisco Bay Regional Board.

3. Review and Ranking of EMC Projects

EMC-2015-001 (Class II-Large Monitoring):

- Drew Coe summarized the Class II-L monitoring project, and how OSU researchers Drs Catalina Segura and Kevin Bladon have revised their study plan and budget addressing (1) are the drainage area and width methods effective in identifying Class II-L watercourses?; and (2) are the identification methods effective in identifying watercourses that have the potential to translate thermal impacts to Class I watercourses?
- This will be a two phased study: (1) broad scale analysis of relative controls of physiographic and climatic variables on perennial flow extent of Class II-L watercourses [100 watercourses with LiDAR and hydrometric data, of which 75 will have field visits]—beginning in 2018; and (2) a focused field-based study of the thermal influence on Class II-L watercourses on Class I systems using sites underlain by sedimentary (3 on JDSF) and volcanic (3 on LDSF) geology—beginning in 2017.
- The timeline for the study was not developed to inform the BOF regarding determination of how to address the sunset clause in the 2014 amended Class II-L watercourse rules. The Board could vote to extend the existing rules, similar to what occurred multiple times for the Threatened or Impaired Watershed Rules, prior to the passage of the ASP rule package.
- Cost savings can occur by limiting field sampling with temperature recording devices to spring, summer, and fall (excluding winter). **The Pls are to be informed of this change.**
- **Three replicate sites on LaTour Demonstration State Forest may be difficult to obtain—additional large landowner cooperators are desired.**
- Flow continuity information in headwater streams may improve existing water temperature models.
- The EMC ranked this project highly at the November 21, 2016 EMC meeting. Member Engstrom moved to recommend funding for EMC-2015-001 up to \$221,271, which was seconded by Member House.

Roll call:

Boston	Aye
Burke	Aye
Coe	Abstain
Condon	Aye
Drury	Aye
Engstrom	Aye
Henly	Aye
Hostler	Aye
House	Aye
Kelly	Aye
Leclerc	Aye
O'Connor	Aye
Short	Aye

Motion carries unanimously.

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

- Dr. Matt O'Connor updated the EMC on the status of EMC-2016-003, including providing a handout with four exhibits illustrating sampling complexities from a Washington unstable area study finalized in 2013.
- A subcommittee has been formed composed of Dr. O'Connor, Drew Coe, and CGS engineering geologists Dave Longstreth and Mike Fuller. CGS staff were briefed on the preliminary scope and objectives of the project. Ronna Bowers, CVRWQCB, will also provide serve as staff support. Pete Cafferata will provide older agency generated reports relevant to this project. **The subcommittee will determine the next steps to take for this project.**
- Member Burke moved to recommend approval of the subcommittee, which was seconded by Member Boston.

Roll call:

Boston	Aye
Burke	Aye
Coe	Aye
Condon	Aye
Drury	Aye
Engstrom	Aye
Henly	Aye
Hostler	Aye
House	Aye
Kelly	Aye
Leclerc	Aye
O'Connor	Aye
Short	Aye

Motion carries unanimously.

- It was determined that further discussion is needed for study design development prior to project ranking by the EMC in April.
- Member Short suggested that a staged approach would be desirable, possibly using a pilot project.
- Possible topics to address with this study include (1) have wider buffer strip requirements over time influenced landslide rates, (2) have "expert system" identified unstable areas in THPs produced landslide features with stressing storms, and (3) have deep seated landslide features subjected to harvesting resulted in increased movement/sediment yields?

EMC-2017-001 (Effects of Forest Stand Density Reduction on Nutrient Cycling):

- Pete Cafferata summarized the rationale for seeking EMC support for the nutrient cycling study proposal. It is one of 10 sub-studies under the umbrella of the Third Experiment at the Caspar Creek Experimental Watersheds, and the only one that is yet to be fully funded. The other

Third Experiment sub-studies are: watershed resilience and recovery study, plant-soil-water dynamics study, water worlds study, bioassessment study, DHSVM modeling study, sediment fingerprinting study, fine sediment study, road rehabilitation study, and a landslide mapping study. It was explained that the nutrient cycling study could complement several of these sub-studies.

- Drs. Helen Dahlke and Randy Dahlgren, UC Davis, are the PIs for this study. A small grant for first year research has been received from the Save The Redwoods League. Randy Dahlgren successfully completed the nutrient study for the North Fork Caspar Creek study (see: https://www.fs.fed.us/psw/publications/documents/psw_gtr168/06dahlgren.pdf)
- Pre-project water samples are currently being collected in the South Fork watershed. Funding is required from the EMC to complement other funding sources.
- The short project proposal was modified to show a better linkage between EMC theme 1, WLPZ riparian function, including EMC critical questions (d) and (e) regarding primary productivity and macroinvertebrate assemblages, to the nutrient study. Also, the background statement in the proposal was expanded to discuss the suite of studies that are part of the Third Experiment, and how this study will complement the work being undertaken in those projects.
- **A detailed concept proposal and budget will be provided prior to the next EMC meeting, building off of study plans previously submitted by Drs. Dahlke and Dahlgren. Funding from CAL FIRE is anticipated and potentially from the EMC.**
- Hyperspectral analysis and LiDAR may be able to be used to determine the hardwood component in the study's sub-watersheds, allowing nutrient input from species such as red alder to be documented.
- THP 1-16-124 MEN for the South Fork of Caspar Creek and this study has had a Pre-Harvest Inspection and is nearing approval; see: ftp://thp.fire.ca.gov/THPLibrary/North_Coast_Region/THPs/THPs2016/1-16-124MEN/
- The EMC assigned this project a number: **EMC-2017-001.**

EMC-2015-002 (FORPRIEM ver. 2.0.) and EMC-2015-004 (Effectiveness of Road Rules in Reducing Hydrologic Connectivity and Significant Sediment Discharge)—Statistical Reviews:

- Drew Coe and Pete Cafferata described work they have conducted to develop statistical reviews for EMC-2015-002 and EMC-2015-004. Jim Baldwin, Statistician, Group Leader for the USFS PSW, was consulted, since he and Jack Lewis provided the statistical review the Hillslope Monitoring Program in 1997. Dr. Baldwin is currently in a phased retirement program and has insufficient time to provide detailed statistical reviews for these two projects, but suggested contacting Dr. Ashley Steel and Pat Cunningham at the PNW in Corvallis for assistance. Dr. Steel is on assignment in Thailand, but Mr. Cunningham was contacted on March 2nd. He provided sound preliminary advice on stratified random sampling and appropriate t-tests to use. Formal contracting arrangements have yet to be determined with the PNW.
- **Member Boston volunteered to assist Drew Coe and Pete Cafferata during further discussions with Mr. Cunningham, refining questions regarding appropriate sample sizes and statistical tests to use.**

- Advantages and disadvantages of independent sampling vs. paired sampling for road hydrologic connectivity was discussed. If logistics is not an issue, a paired approach is preferred. Two visits to field sites will likely require landowner permission for access.
- **Matt Dias and Erin Kelly volunteered to get a short (1 page) letter to CLFA, CFA, and FLOC to determine if landowners would be receptive to granting access prior to a Pre-Harvest Inspection.**
- Kevin Boston stated that collecting data with contractors would eliminate potential enforcement issues that could result from using agency personnel to collect the field data.
- **If contracts are needed for the work with the USFS PNW, they need to be developed quickly to encumber fiscal year 2016 EMC funds from the BOF.**

4. Discussion of Contracting Processes and Encumbering Funds

- Matt Dias provided the EMC with an example of a completed CAL FIRE contract with Oregon State University (Sediment Fingerprinting Study at Caspar Creek), illustrating the final product that will be needed for EMC funded projects.
- Final fund encumbrances are required before June 30, 2017 for the initial \$425,000 allocated for EMC monitoring studies in fiscal year 2016/17. The goal is to have final DGS approval for contracts before June 30th. Contracts should go to the CAL FIRE Contracts office by April 1st if possible.

5. Public Forum -- None

6. Announcements

- Russ Henly announced for Sal Chinnici that Nick Harrison has left Humboldt Redwood Company for a Hydrologist position working for Battelle Ecology on the National Ecological Observatory Network (NEON) project in Boulder, CO. HRC is recruiting for a hydrologist; see: http://www.hrcllc.com/wp-content/uploads/2017/03/HR_17_HR_HRC_Lead-Hydrologist_External.pdf
- CLFA will hold their Spring Workshop and Annual Meeting on March 10-11, 2017 in Sacramento (McClellan).
- Will Olson has completed his Master of Science Thesis at Michigan Tech, which includes data from the Boggs Mountain Demonstration State Forest runoff and erosion study: Olsen, W. (2016). EFFECTS OF WILDFIRE AND POST-FIRE SALVAGE LOGGING ON RILL NETWORKS AND SEDIMENT DELIVERY IN CALIFORNIA FORESTS. <http://digitalcommons.mtu.edu/cgi/viewcontent.cgi?article=1346&context=etdr>
- The Sonoma County Forest Conservation Working Group will hold their 2017 North Coast Forest Conservation Conference on June 7-9, 2017; see: <http://sonomaforests.org/event/2017-north-coast-forest-conservation-conference/>
- The Northern California Prescribed Fire Council spring meeting will be held on March 7-8 in Petaluma. See: <http://www.norcalrxfirecouncil.org/>

7. Next Meeting

- Matt Dias will send out a Doodle poll for the next two meetings to be held in Redding and Ukiah, respectively.