**Project Number: EMC-2015-002**

**Project Name: FORPRIEM 2.0**

FORPRIEM 2.0 Update

January 12, 2016

First task: Develop a methodology for a stratified random sample of completed THPs and NTMP-NTOs to better test the FPRs on a larger percentage of higher risk sites.

* Suzanne Lang, Francesca Rohr, Drew Coe, and Pete Cafferata met on January 12th to discuss how to move forward with the first task.
* The current plan is to use the following ArcGIS layers to assess erosion risk:
  + DEM slope (index for shallow landsliding)
  + Deep seated landslide layer (Wills et al. 2011)
  + E-EHR (surface erosion hazard) [note incomplete soil survey data in Calaveras and Humboldt counties at this time] (program currently available from CAL FIRE GIS Program, Santa Rosa)
  + Drainage density (National Hydrology Dataset)
* A simple algorithm will be developed to combine these parameters for a composite score, similar to that used by McKittrick (1994) to rate erosion potential for super planning watersheds in California.
* A sensitivity analysis will be performed to determine how important vegetation cover is in the E-EHR methodology (i.e., assume 100% cover for all areas, vs lower percent cover for different silvicultural systems).
* The erosion risk procedure will be beta tested by CAL FIRE GIS and Watershed Protection Program staff.
* When the working group is satisfied with the algorithm and the modeling results it produces, it will be vetted through the EMC to the agencies and public.
* After a stratification scheme is developed for higher risk plans, the ArcGIS THP layer and a randomization scheme can be used to select the appropriate number of plans in each risk category (high, medium, and low)—allowing an adequate relationship to the total plan population to be generated.

Subsequent tasks include:

* Investigate methods for electronic data entry—possibly using smart phones and Survey 123 or similar applications.
* Redesign the field forms to collect data meaningful to all the agencies, as well as addressing the newer BOF rule packages (ASP rules, Road Rules, 2013, etc.).
* Investigate collecting WLPZ canopy data with hemispherical photography.
* Investigate the selection of monitoring sites by hillslope position (i.e., toe, midslope, ridgetop).
* Integrate lessons learned in the HMP, MCR, IMMP, BCTF, and FORPRIEM (1.0) projects into FORPRIEM 2.0.
* Develop a spatially explicit database for data storage.
* Develop a detailed QA/QC program simultaneously with the main plan sampling program.
* Develop a methodology manual and training program for all agencies, so as to more fully integrate CGS, DFW, and RWQCB staff in data collection.

Updated timeline

Finish the draft methods document in 2016; beta test revised procedures in 2016; schedule training sessions in late 2016; implement program by the end of 2016. Collect data for a minimum of 3-5 years.

References

McKittrick, M. 1994. Erosion potential in private forested watersheds of northern California: a GIS Model. Final report prepared for the California Department of Forestry. Sacramento, CA. 70 p. (data available as a CAL FIRE—FRAP GIS layer plus database). <http://www.bof.fire.ca.gov/board_committees/monitoring_study_group/msg_supported_reports/1994_supported_reports/4_-_mckittrick_1994.pdf>

Wills, C.J., F.G. Perez, and C.I. Gutierrez. 2011. Susceptibility to deep-seated landslides in California. Map Sheet 58. California Geological Survey. Sacramento, CA. <http://www.conservation.ca.gov/cgs/information/publications/ms/documents/ms58.pdf>