

March 15, 2002

Mr. Patrick Higgins
Klamath Resource Information System
1987 Upper Bay Rd.
Arcata, California 95521

Dear Mr. Higgins,

The California Geological Survey (CGS), as a member of the North Coast Watershed Assessment Program (NCWAP), has conducted a cursory review of the Klamath River Information System (KRIS) CDs for the Gualala River Watershed (KRIS Gualala Database, Final Draft, dated 2/3/02) and Big River Watershed (KRIS Big River Project, dated 10/31/01). The extremely limited available time for review of these CDs prevented a complete and thorough evaluation by the deadline of March 15, 2002 established by Resources Agency. Nevertheless, the review was conducted because if these CDs are released in their current state, there would be implied consent of approval by CGS of the geologic data and conclusions presented, and this implied consent is incorrect. CGS has the following concerns, comments, and recommendations:

1. At this point in the Gualala NCWAP assessment, CGS has reservations concerning conclusions presented in the Gualala Technical Support Document (TSD) regarding sources of sediment. Data compiled and interpreted by CGS to date conflicts with the Total Maximum Daily Load (TMDL) charts of contributing sediment source types on the KRIS Gualala CD. The TSD assumes the geology is similar across the entire watershed (approximately 300 square miles). CGS landslide and relative landslide potential maps show the geology is not similar across the watershed which thereby invalidates the assumptions used as a basis for the Gualala TMDL determination. Furthermore, the TSD does not include mapping deep-seated landslides for development of the TMDL, which as a result, overlooks a potential major sediment source. Moreover, the landslide mapping for the TMDL study was not performed by a California licensed geologist with the knowledge and experience necessary to properly conduct such investigations. As KRIS aptly points out, "California [California and Business and Professions Code] requires that licensed geologists be involved directly in decisions related to geologic conditions (see requirement)."

Additionally, TMDL charts and chart captions for all Gualala River Watershed subbasins (Buckeye Creek, North Fork, Rockpile Creek, South Fork/Mainstem Gualala, and Wheatfield Fork) show and state that roads are the largest sediment source based on data in the TSD. Similar charts and discussion regarding sediment sources and their purported volumes of derived sediment have been removed from the Gualala Synthesis Report with consensus of all Gualala Team members including representatives from CGS, Department of Fish and Game (DFG), California Department of Forestry and Fire Protection, North Coast Regional Water

Quality Control Board (NCRWQCB), and the Department of Water Resources (DWR). Therefore, these TMDL charts should be removed from the KRIS Gualala CD or there should be a description of the limitations with a statement that CGS does not support the methodology and the conclusions of the TMDL sediment source analyses.

Also, CGS recommends that conclusions regarding sediment sources in chart captions and other text on the KRIS Gualala CD be removed. The conclusions set forth based on the TSD are unsubstantiated and release of the TSD findings on a CD where the CGS is shown to be a "cooperator" is unacceptable. CGS will not consent to the release of such unsubstantiated geologic information where it can be viewed by the public as supported by CGS and its geologists. Release of such information exposes CGS and the Resources Agency to future disputes and litigation.

2. There is a lack of discussion of natural causes of mass wasting. The KRIS Gualala CD cites numerous instances where timber harvesting and logging adversely affect sediment delivery to streams but few or none where natural landslide events have contributed sediment. For example, "There are many ways that timber harvesting activities may interfere with the availability or quality of domestic water supplies," "Actual measurements in Freshwater Creek, after logging in more than 50% of the basin, showed turbidities over 25 NTU for weeks at a time (Higgins, 2001)," and "Case studies in southwest Oregon showed that streams damaged by logging also have significant problems with bed mobility, which can cause mortality of salmon eggs and alevin (Nawa and Frissell, 1993)." While watershed disturbances from timber harvest practices undoubtedly result in increased sediment delivery to streams, other potentially significant natural causes should be discussed as well. Lack of attention to natural causes does not provide for adequate representation of naturally occurring mass wasting phenomena and sediment derived from them.
3. It is recommended that the CGS relative landslide potential maps be incorporated into the KRIS Gualala CD (replacing the SHALSTAB maps) when they are completed. It is also recommended that the final KRIS products not be released until the CGS relative landslide potential maps are incorporated in the final KRIS products. The memorandum dated February 4, 2002 from the Technical Advisory Committee on Forest Geology to John Parrish, Executive Officer, State Mining and Geology Board (copy provided), stated that "The parameter poor, topography-based SHALSTAB program falls well below the current standards of geologic/geotechnical practice." Therefore, the inclusion of the SHALSTAB maps as landslide hazard maps in the KRIS products is not recommended or supported by CGS.

In conclusion, CGS has conducted a cursory review of the above KRIS CDs and has identified significant concerns in regard to unsubstantiated data and conclusions contained therein. While these CDs are only draft versions, CGS considers their

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release to the public premature and if released gives opportunity for geologic data and conclusions to be misconstrued and misused by community members, watershed stakeholders, and local and regional agencies. Release of KRIS Gualala and KRIS Big products increases the potential for litigation and disputes over land use proposals, which can be avoided by more thoughtful data content. Therefore, CGS advises caution regarding KRIS CD distribution; the content of the final version of the KRIS CDs may contain contradictory data and conclusions when compared to the draft KRIS CDs. If released, CGS requests the inclusion of the following disclaimer on the draft KRIS Gualala and Big CDs: Conclusions and data presented on this CD do not necessarily represent the endorsement of all NCWAP departments, including the California Geological Survey.

Additional comments regarding content of the KRIS Noyo that may be applicable to the KRIS Gualala and KRIS Big products are presented on the enclosed memorandum dated June 19, 2000 from Mr. William Short, CEG to Mr. Gary Reedy.

If you have any questions or need additional information, please contact me at (916) 322-2588.

Sincerely,

Stephen C. Sterling, CEG
Supervising Geologist
North Coast Watershed Assessment Program

Attachments

Cc: Mr. Dave Beeby, Principal Geologist, California Geological Survey
Mr. Jim Davis, State Geologist, California Geological Survey
Ms. Luree Stetson, Deputy Director, Department of Conservation
Mr. John Parrish, Executive Officer, State Mining and Geology Board
Mr. Russ Henly, Watershed Assessment Manager, Fire and Resource
Assessment Program
Ms. Cathy Bleier, Special Assistant, Resources Agency
Ms. Maria Rea, Assistant Secretary, Resources Agency