

To: Water Quality Control Board

Date: Jan. 24, 2017

SUBJECT :

COMMENT LETTER: BENEFICIAL USES AND MERCURY OBJECTIVE -  
SUCTION DREDGE MINING.

1. Salmon are not being killed or harmed by suction dredging; nor are any other endangered species. Suction dredges remove 98 % elemental mercury and by aeration the 2 % or less, that is left, and not amalgamated to particles of 63 microns or less, which is most likely going to be converted to elemental mercury, to be removed at a subsequent time by a dredge. Methylmercury is not created by the dredge and can only be formed in the presence of organic material under anaerobic or possibly facultative conditions.

2. Salmon may be helped by dredges because they can leave holes that act as refugia from the hot summer temperatures of the water streams, and protection from boats rafts, and kayaks. They may also provide hiding places for young fish. There are also reverences that dredging break the cycle of Ick, Ichthyophirius, (a ciliated protozoan); a parasite affecting stressed fish. Those that say holes trap fish need to look at the fact that the holes may be the only place for the fish to survive in a drying stream.

3. Dredgers do not dredge in waters where fish are spawning or eggs are present. Dredgers do provide gravel in stream beds where none may be present which can make ideal gravel for fish to lay eggs.

4. When Antiquities are found on claims they are reported and areas avoided until those area can be evaluated. Important sites that otherwise might never be found can be surveyed and evaluated. Dredgers typically work in the water stream, thus the stream has already disturbed any relics or historical items and I have not heard of anyone finding significant items.

5. Gold miner and prospectors have historically been good for California. Gold mining is what San Francisco and Sacramento were built on. The miners built many of the flumes and dams that are currently used for irrigation and water supply. Some dams and railroad bedding were actually built with tailings from mines. The mines needed to get the ore to the crusher, smelters, and refiners and provided a reason to expand the rail system.

6. Today mercury is not used, in the United States, in field gold recovery... but is a nuisance left over from legacy gold mining. Todays gravity separation systems and shaker tables provide a clean system for recovery. When mercury is present, in gold recovery, it causes complications that require the use of a retort to separate the gold from the mercury or other processes.

7. Mercury and selenium will bind and lessen the toxic effects of elemental mercury and methyl mercury toxicity. Maybe the Water Board should look into treating organically rich areas, where MeHg, is high in fish tissues with selenium. Once the mercury is bound it should no longer be available for Bio-accumulation and magnification in the down stream waters.

8. The greatest percentage of Mercury in California streams is not going to come from dredges. Many of the coastal hills are loaded with mercury ore and provide a natural source.



9. One thing that has not been talked about is seasonal turbidity, organics movement down stream, caused by seasonal turnover of lakes and streams by thermal inversion. Because of this and storm water run-off I think it is safe to say the organics in river, pond and lakes are not locking up the methylmercury.

10. One item that I noted in the draft copy eluded to a study that said that song birds had a high mercury load in their tissues (page 65). That caught my eye because I remember talk about the old Selby Smelter, that was located in Crockett, Ca. And the air pollution it had caused resulting from the wind blowing heavy metal through the wheat grasses in the area, which acted as natural filters in their seed grains, that were eaten by the birds. There were even reports of horse deaths in the area attributed to the feed grasses.

11. In one of the WQCB workshop meetings there was reference to the use of a vacuum cleaner spreading Mercury and should not be used for Mercury clean up but it should be noted that there are special mercury vacuums that can in fact be used for Mercury cleanup. These are special vacuum cleaners with special traps and filters called Mercury removal vacuums designed just for Mercury cleanup.

12. The safest way mercury can be cleaned up is to do it under water. Building a berm around the Mercury and flooding the berm to submerge the Mercury and applying a squeezable suction bottle with a tube extensions, containing water, to suck up the Mercury, while maintaining a water cover is one safe way to pick up and retain the Mercury. Note...always proper personal protection per MSDS requirements. This is how a miner would recover mercury droplets to put in proper storage.

13. It should be noted that the reason there are so many abandoned mines was not due to lack of gold. President Franklin Delanor Roosevelt, by Exec. Order, Banned American citizens from owning gold in 1933. Executive Order 6102, remained in effect for 78 years until August 15, 1974, when President Gerald Ford signed Legislation removing the ban on ownership of gold by citizens. Needless to say that the miners by that time were too old to mine or were gone and the abandoned mines were no longer safe because of rotten timbers and unstable conditions.

14. It should be noted today the price of gold has risen and the per ounce price using suction dredging makes small mining affordable. Gold mining is a business. An ounce of gold is just about what you can fit on a teaspoon because of it's specific gravity, which is about 19 times heavier than water.

15. It should be noted that gold mining is a business and if it not profitable will disappear. The water quality act has to take into consideration the financial impact of it's regulation. Claims are Mineral Estates and pay local property taxes and BLM fees and can be bought and sold just like real estate. When profits are made taxes are paid on profits as any other business would do. Money is not only made on the minerals that come out of the ground but those who mine the miners; such as, hardware stores, gas stations, grocery stores, motels, hotels, campgrounds, RV centers, mining equipment, off road vehicles, and other items.

To: Water Quality Control Board

16. Many vacation dollars are going out of state as miners travel to other states or countries to mine. At the same time vacationer that would have come to California are going to other places as recreational and small scale miners are stopped from using their rights, as requirements are being over regulated and bans are put in place.

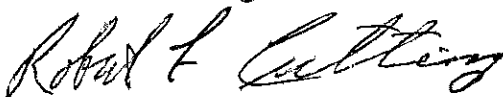
17. Gold prospecting and mining were over a \$100,000,000 dollar business in California Prior to the moratorium put in place around 2006.

18. Based on the new rules, prohibiting the use of a motorized, suction devices, within 300 feet of any lake, river, stream by definition should outlaw jet boats, outboard motors and some water pumps.

19. Although the un- patented mining claim owner has title to the valued mineral they have found and no one, without permission of the claim holder, can take any minerals, the land itself is managed by the BLM or Forest Service and any one following the State Laws can hunt, fish, hike or camp on the claims.

20. A patented claim owner, not only owns the valuable mineral but he also owns the land. BLM and Forest service are not involved in managing the property.

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