

Barnes, Peter@Waterboards

From: Mark Miller <millerinsmark@verizon.net>
Sent: Thursday, March 26, 2015 8:38 AM
To: Barnes, Peter@Waterboards
Subject: Opposed to the Thermal Curtain and Draft EIR

Follow Up Flag: Follow up
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Dear Mr. Barnes,

This email expresses my concern with the Draft EIR and proposed thermal curtain on Lake Almanor and urges you to terminate the installation plans. My concern is that installing the curtain will be toxic for wildlife, including the fish that we consume. It will also have detrimental effects to tourism business at Lake Almanor, and decrease home owner property values and become a heavy toll on tax payers.

Below is a photograph of the degraded Whiskey Town, CA geosynthetic thermal curtain before it was replaced. Whiskey Town uses a 60-mil polypropylene thermal curtain. As you can see, large pieces of membrane have broken down into smaller fragments likely through abrasion and photodegradation (sunlight, over time, breaks plastic down into smaller and smaller pieces). It is known that fish tend to eat small bits of plastic when it is in their natural environment and the plastic toxins are slowly dissolved into the fish. When larger fish eat these fish, plastic toxins accumulate up the food chain and ultimately lands on our kitchen table. This is a known significant problem in the Great Lakes of Michigan.

From my understanding, Polypropylene, similar to that used in Whiskey Town, on its own doesn't have many estrogenic properties. It's Polypropylene preservatives, dyes, and chemicals added to prevent it from breaking down that do, says Usey. For instance, preservatives called BHA and BHT are often added to polypropylene plastics, and both have been shown to either mimic estrogen or interfere with the endocrine system. If instead we are going to use a geosynthetic PVC, it contains hormone-disrupting chemicals called phthalates, and it's been linked to breast and liver cancers; the Environmental Protection Agency classifies it as a known human carcinogen. See reference list below regarding these and similar geosynthetic materials, and how, when broken down into small particles, the particles become toxic to fish.



Putting a sheet of plastic the size of 14 football fields would degrade the aesthetics of the natural beauty of the lake. The eye sore will discourage people from visiting the lake, resulting in them visiting other lakes nearby that have more natural beauty, and ultimately harming the many small businesses that thrive off of the local tourism economy.

For these reasons, please reconsider the installation of the thermal curtain, which would have so many negative costs for Lake Almanor in exchange for unproven claims of improvement downstream. The thermal curtain construction and maintenance, and rebuilding a decade or so down the line is extremely costly to taxpayers, at a time when there are not enough tax funds to go around. Installing the thermal curtain is costly and foolish at best, with HUGE potential downsides, for likely a minimal and uncertain downstream benefit.

References:

- (1) <http://www.redding.com/news/from-whiskeytown-lake-to-sacramento-river-new>
- (2) <http://www.lakescientist.com/microplastics-pollution-great-lakes-ecosystem-summary-presentations-iaglr-2014/>
- (3) <http://www.theoec.org/events/lake-erie-twofer-tiny-plastic-particles-and-toxic-algae-threaten-lake-waters>
- (4) <http://www.quora.com/What-are-geo-synthetic-materials-How-can-they-be-used-for-flood-management-structures>
- (5) <http://www.rodalenews.com/bpa-free-plastics>
- (6) http://www.fabricatedgeomembrane.com/wp-content/docs/articles/0612GS_WhiskeytownReservoir.pdf
- (7) http://www.waterboards.ca.gov/waterrights/water_issues/programs/water_quality_cert/unffr_ferc2105_eir.shtml

Thanks,

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