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Protecting Water, Forests and Wildlife

1/25/2018

Cal Fire Timber Harvest Review Team
6105 Airport Rd.
Redding, CA 96002
*(submitted electronically)*

**Comments regarding THP 2-17-070 SHA "Artemis"**

Dear Timber Harvest Review Team,

Battle Creek Alliance (BCA) wishes to provide additional comments and documentation to your departments regarding the Battle Creek watershed and the new plan which has been proposed for it.

**Overview**

In this watershed, industrial timberland covers approximately 85,000 acres. Approximately 30,000 acres of those have been cut, or 1/3rd. Based on the unique HD_Num in the FRAP database there have been 56 completed THPs in this watershed since 1997. There are 14 more THPs which are approved but not completed. (Figures 1, 2 and Attachment 1 demonstrate this.) This alone is evidence of significant cumulative impacts which have not been disclosed in this THP under review. Yet, page 85 of the THP states in eight places that there are "No Reasonably Potential Significant Effects". There is no explanation of what that determination is based on, and there is no evidence to support that declaration. In fact, this THP minimizes, ignores, and obscures the ongoing significant effects which the approval of this THP will add to. The THP presents only conclusory statements and generalized lists, unsupported by material facts, measured data, or population surveys. The THP presents a small amount of old data regarding Sierra Pacific Industries' (SPI) herbicide usage, but the samples were taken across SPI's 1.5 million acres of land holdings and there is no methodology included of how the samples were taken.

14 CCR § 953.11(a) states that a THP is meant to identify the potential significant effects as required by CEQA. This THP fails to do this by being willfully ignorant of the real land.

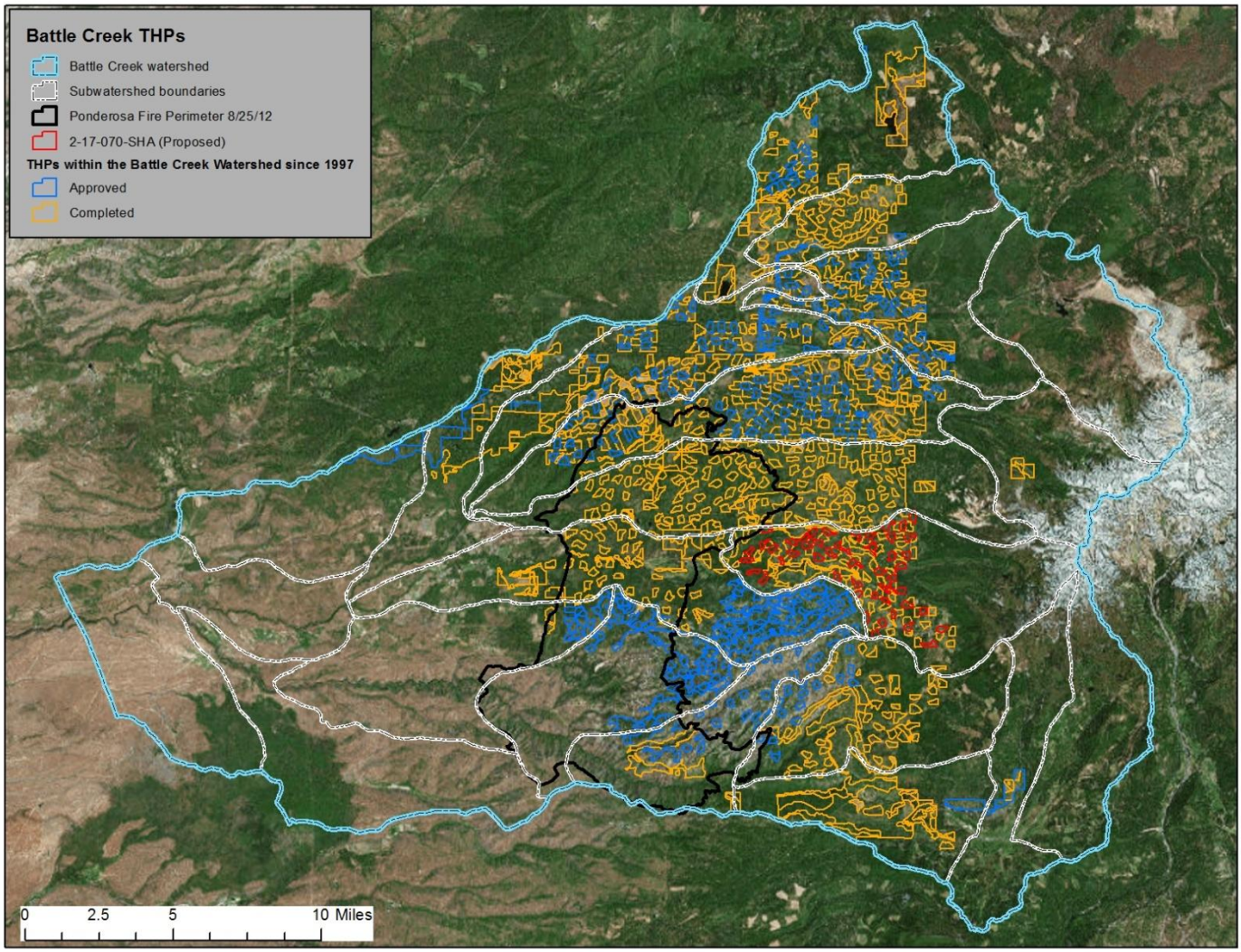



**Fig. 1. The realistic view of logging projects in the Battle Creek watershed, produced by GIS specialist Curt Bradley. Source of data:** http://www.calfire.ca.gov/resource_mgt/resource_mgt_forestpractice_gis

This THP also fails to accurately disclose Past Projects on Page 124 by confining its list to the Planning Watershed and a one mile radius. It lists only 5 THPs. It lists THP 2-10-003 TEH (Dry Gulch) which is still being cut, as 234 acres. In actuality, that is a 1,048 acre plan. This THP also lists only 200 acres for 2-EM-106-SHA. There are 9 Emergency Notices we know of; there may be more but they are not posted online. The ones we are aware of are numbered 2-12EM-016 through 2-12EM-027, so there seems to be an error in the one listed in the THP. The EMs are part of the 2012 Ponderosa Fire area. That fire burned over 27,676 acres and was extensively salvage logged. These deceptive omissions render this THP factually false and misleading. It does not serve to uphold 14 CCR § 897(b)(2): "Individual THPs shall be considered in the context of the larger forest and planning watershed in which they are located, so that biological diversity and watershed integrity are maintained within larger planning units and adverse cumulative impacts, including impacts on the quality and beneficial uses of water, are reduced."

If it is the THP's position, and/or the Review Team's, that the adjacent plans are in different planning watersheds, there is still a cumulative watershed effect when all the planning

watersheds are part of a larger watershed. For example, this new plan and the Dry Gulch THP (2-10-003) both drain to Digger Creek (i.e. they are part of the Digger Creek watershed). But, Digger Creek and all the other tributary streams in Fig.1 which have been used to delineate the planning watersheds, drain to the main stem of Battle Creek. Hence, they are also part of the larger Battle Creek watershed.

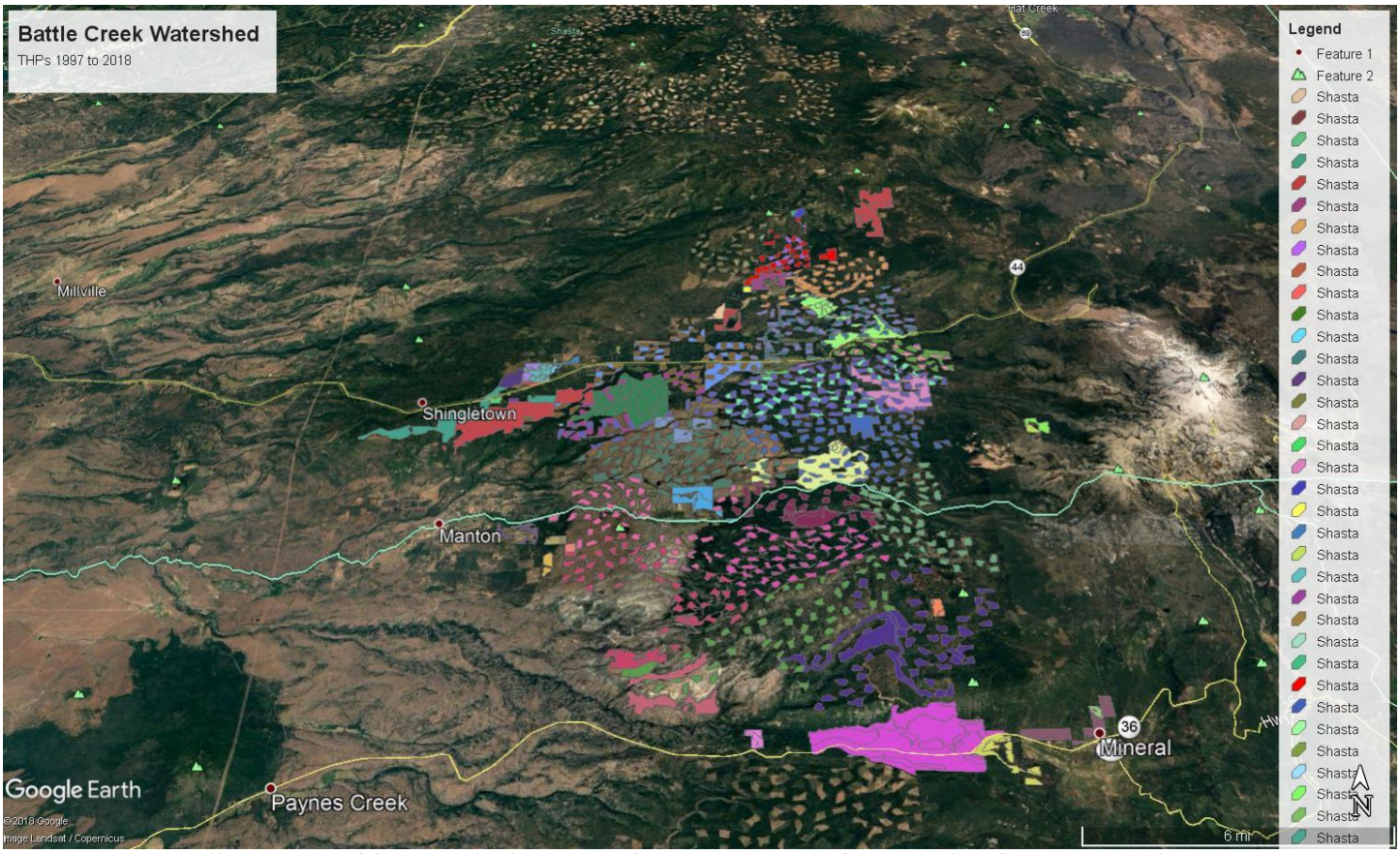



**Fig. 2 Curt Bradley's KML file map linked to information in Cal Fire's database. (Attachment 1.)**
**Source of data:** http://www.calfire.ca.gov/resource_mgt/resource_mgt_forestpractice_gis

We are extremely disappointed to see that the plan's cumulative impacts (CI) section is primarily a copied and pasted version of the same verbiage which has been used in the dozens of plans which have been filed for this watershed before/since we began working on the issues in 2007. As we will state again for the administrative record, this copied and pasted CI assessment (CIA) is a carefully constructed omission and misrepresentation of science and knowledge which has only served in the past to let this watershed's forests, water, soils, and wildlife be decimated by excessive industrial logging. It is an egregious fraud which rapaciously destroys irreplaceable resources.

This THP narrows the scope of the CIA to a limited area, ignoring the aggregate of the numerous past THPs and post-fire Emergency notices. This does not conform to CEQA's intent or laws, nor to the Forest Practice Rules (14 CCR 897 and 898.2) which demand sufficient detail and clarity of a THP, while expressly prohibiting misleading, incorrect, or insufficient information.

This THP is full of sweeping generalizations which have no particular relevance to the actual Battle Creek watershed. By omitting mention of the real number of acres which have been logged in the Battle Creek watershed, this THP fails to honestly provide sufficient information to make an informed decision. This THP fails utterly to provide any real measurements regarding this actual place.

Following are just a few points to outline how much is missing from this THP's CIA. Our comments about the lack of relevant, specific information applies to the complete CIA though. As the agency which determines compliance with California's environmental laws, it is your responsibility to honestly evaluate the CIs of an additional plan. This evaluation must include information from all sources, not just information from the submitter of the plan who is supposed to regulated by you. Your mandate is to protect the public trust resources. Your decision must uphold those protections, and must be based on best available science and reality-based knowledge.

**Water Quality**

BCA has been collecting water quality data since 2009. As of December 31st, 2017 we have collected 8,491 samples that measure turbidity (NTUs), water and soil temperature, and water pH. Jack Lewis, one of the hydrologists who has analyzed our work, states "BCA sampling program has been ambitious by USGS standards and these data show that both turbidity and summer water temperatures have increased in spatiotemporal association with fire and salvage logging. USGS is the primary agency in the U.S. that monitors water quality in rivers and streams. They still use manual sampling at the overwhelming majority of their sites, and have used such data in hundreds if not thousands of reports. BCA sampling frequency (about 31 samples per station-year) is typical or greater than the average USGS sampling frequency, which has for example remained at 20-30 per year for the past 25 years at stations in the highly valued Lake Tahoe basin. BCA has 13 sampling sites in Battle Creek. It is exceedingly rare (if not impossible) to find a watershed of this size where USGS has taken so many water quality samples over a 7-year period."

Our measurements have been taken in the actual place this THP encompasses and reflect the progression of concrete significant changes in the resources. It is reasonable to hypothesize this THP would add more significant changes. The THP fails to provide any verifiable evidence from the land here. Although SPI has produced several reports in the past, they have been reviewed by professionals and judged to have significant flaws in their methodology. (Attachments 2,3.)

Attachment 4 is the water temperature data analysis from our water sampling program. We have sampling sites on Digger Creek-- a tributary of Battle Creek. This plan proposes logging more of the land where Digger Creek flows. Our lower site on Digger Creek (DCH) was heavily impacted by salvage logging after the 2012 Ponderosa fire. There had not been recent logging near our upper Digger Creek site (DC) until recently. Page 25 of the report states: "At Digger Creek, maximum summer water temperatures at DCH tracked those upstream at DC fairly closely in 2010 and 2011 (Fig. 16). Starting late in June 2012, after portions of the watershed between the two stations had been clearcut, the DCH maxima started to rise while those at DC continued to decline. The clearcuts (about 75 ha) did not extend to Digger Creek but did include some surface water in smaller tributaries. DCH was affected heavily by the fire in late August

but no salvage logging occurred until after September. Salvage logging removed a great number of burned trees from the riparian zone and, from June to early September of 2013, maximum water temperatures in DCH were 8-10°C higher than in DC, exceeding 20°C on most days. The 2013 temperature pattern persisted in the summers of 2014 and 2015."

Our data continues to show higher summer temperatures in Digger Creek below the logged acres as of this date.

Our turbidity data has also been analyzed by five hydrologists in 2011, 2012, 2014, and 2016. These are Attachments 5, 6, 7, 8.

As part of the analysis for our 2014 report and 2016 paper, logged areas were identified using 1 meter resolution imagery from the US Department of Agriculture's National Agriculture Imagery Program (NAIP) that was acquired on 8/17/2014 and digitized into a GIS program at a scale of 1:24,000 by GIS specialist Curtis Bradley. Jack Lewis identified areas within the Ponderosa fire that were salvage logged using Google Earth imagery. Lands zoned timber production were identified with GIS data and maps from Shasta and Tehama County. We then intersected the logged and salvaged logged areas with the areas zoned for timber production to determine the proportion of timber producing lands that were logged. Looking at lands zoned for timber production within the watershed, 28,483 acres of 85,385 acres of those lands had been cut or about 33%.

The rate of harvest (ROH) contributes to significant cumulative watershed effects, which have been occurring for 20 years under the current practices. These effects have not been alleviated by Best Management Practices (BMPs). As Lewis et al. states "Cumulative impact assessments in California THPs routinely state that there are no 'reasonably potential significant adverse effects' (possibly after mitigation) on watersheds, soil productivity, biological and other resources; and that any nearby THPs or other projects produce no significant environmental impacts. However, it is well-documented that BMPs do not completely eliminate logging impacts on accelerated sediment delivery (Ziemer and Lisle 1993; GLEC 2010; Klein et al. 2012; Wagenbrenner et al. 2015, 2016). These studies are consistent with our results indicating strongly that BMPs did not prevent major increases in turbidity and, hence, sediment delivery associated with logging in the study area.

**A central issue is whether cumulative impacts from a large number of spatially and temporally proximal logging activities deemed "insignificant" in THPs, are significant at the watershed scale. Our results indicate that they are significant, despite BMPs, with negative impacts on water quality, aquatic habitats, and imperiled salmonids. While regulatory agencies have assumed otherwise, removing the forest canopy affects both hydrology and slope stability/erodibility and, regardless of road design or harvest method, increases sediment delivery to waterways, especially in mountainous terrain. The results of this and other studies (e.g. Klein et al. 2012; Lewis et al 2001) indicate that individual logging operations cumulatively elevate sediment delivery to streams. Thus, a high concentration of projects in space and time is likely to degrade water quality and aquatic ecosystems via sedimentation, and it is unlikely that such negative impacts can be prevented or avoided without limiting the total area logged in watersheds.**"

In 2015, fish biologist Matt Brown from the US Fish & Wildlife Service wrote to the Regional Water Board regarding his department's concerns about increasing fine sediment in Battle Creek. (Attachment 9.) His department's observations and analysis are diametrically opposed to SPI's THP. He wrote:

" ...an RBFWO employee responsible for collecting temperature data from temperature loggers deployed throughout the Battle Creek watershed was tasked to collect, in addition to temperature data, information on the condition of SF Battle Creek and related tributaries in regards to increased sedimentation... He noted that there was a considerable increase in sand throughout Battle Creek in this area and significant erosion and evidence of high flows in Soap Creek. This area of the Battle Creek watershed is influenced by effects stemming from the Ponderosa Fire, which occurred in this area 8-31-2012." (Page 2.)

"During trap sampling from all years prior to the Ponderosa fire, the maximum reading was 35.4 NTU's. Since August 2012, the maximum reading was 832 NTU's during a thunderstorm in May 2015. We think that the increase in turbidity is a result of the August 2012 Ponderosa Fire, subsequent salvage logging and other forest management practices, and highly precipitous "Atmospheric River," rain events in December of 2012 and 2014 within the Battle Creek watershed. We plan to further analyze our data as it becomes available.
4) **Additional turbidity measurements.** Turbidity samples have also been collected when the BCJSMP fish traps were not fishing or during the course of other studies. In some cases samples were taken because turbidities were remarkably high. This data was not used in the previous analysis because sampling effort has increased in recent years due to the increase in turbidity. Many samples taken during high flow events since August 2012 were higher than 832 NTU's. The maximum reading of a non-sampling day in February of 2014 was over 1700 NTU's." (Page 6.)

**Fig. 3. Evidence of ongoing significant impacts. There was .6" rain Thursday night 10/19/17. This is South fork Battle Creek at Manton Rd./Wildcat 10:30 a.m. Friday 10/20/17. It measured 357 NTUs.**

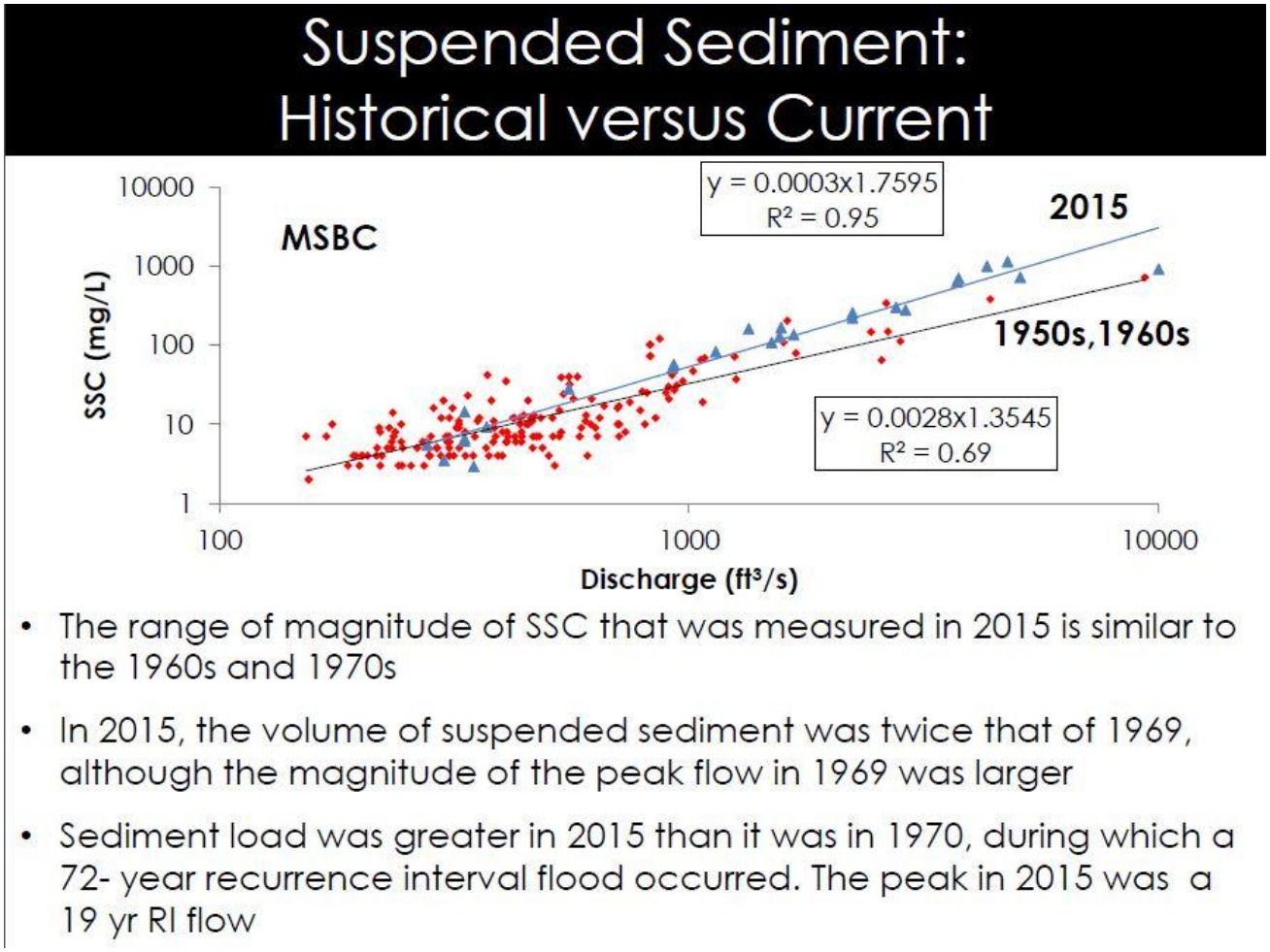



**Fig. 4. Graph of Battle Creek sediment analysis, historically to 2015 from Henkle et al. (2016).**

Figure 3 is visual evidence of sediment impacts in Battle Creek. This is further evidence to support Matt Brown's USFWS letter.

Figure 4 reveals the continuing upward trend in suspended sediment in the Battle Creek watershed. The steadily climbing trend occurred when the streams highest flows and other sediment producing events were lower than in the past.

Figure 5 shows the increased logging post-2012 fire. We can find no discussion of the effects the fire and salvage logging had on the present and future conditions of this watershed in this THP. This omission does not conform to 14 CCR § 15144's requirement that “an agency must use its best efforts to find out and disclose all that it reasonably can."

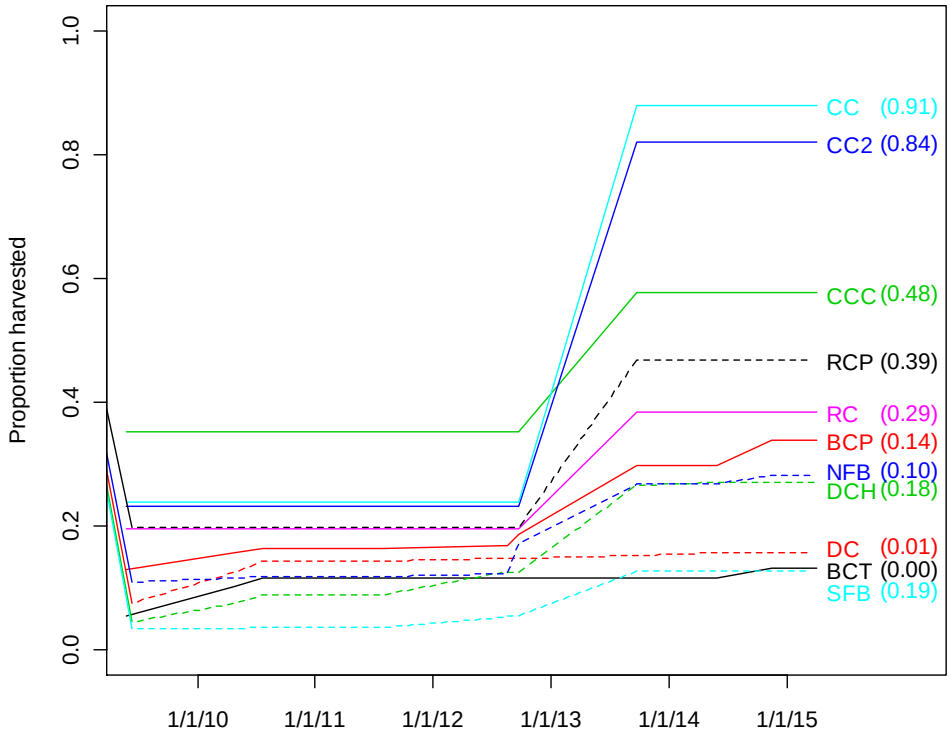



**Fig. 5. Trend/progression analysis of logging percentages between 2010 and 2015 of the drainages where our water sampling sites are. Numbers in parentheses are the proportions of each drainage that burned in the Ponderosa Fire. Steep section starting in Sept. 2012 is post-fire salvage logging. (Attachments)**

We have sent most of our attachments to agencies in the past. None of these documents which show ongoing CIs in the plan area are even mentioned in SPI's document. This THP's outdated, copied and pasted CIA has no relation to current and future conditions in the watershed. The purposeful avoidance of an honest, thorough analysis does not adhere to California's laws.

## Ongoing use of "planning watersheds" to avoid honest accounting of ongoing CIs

The use of the CalWater 2.2 system**,** that divides the industrial timberland part of the Battle Creek watershed into 9 smaller “planning watersheds” based on the smaller tributary creeks of Battle Creek, has been used by SPI in its THPs as the justification for not looking at the cumulative impacts of all of the projects together.

What defines a watershed, or drainage basin, is that it is an area that collects all of the surface water from rain and melting snow and funnels it to a single point**.** A watershed is separated topographically from adjacent watersheds by a ridge or a mountain. This area of Battle Creek, with the Shingletown ridge to the north that Highway 44 follows and the ridge that Highway 36 runs along to the south, and the manner in which it channels water to the

Sacramento River, conforms to this definition. The tributary creeks of Battle Creek, which have been named as the "planning watersheds", do not conform to the definition.

“Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.” [CEQA Guidelines, § 15355, subd. (b).] Agencies must pay close attention to the analyses to ensure that environmental damage, possibly permanent, is not passing undetected because of occurring in small incremental amounts. This attention is not being paid when the Timber Harvest Review Team uses the flawed methodology of judgment by the planning watershed system. In fact, this methodology is contrary to law. 14 CCR § 895.1 states that “the rationale for [using a planning watershed] is that all impacts from the proposed operation will only be seen within the area that is drained by that watershed and areas downstream of that watershed.” This is being ignored by the use of the planning watershed system because a large percentage of the “area that is drained by that watershed and areas downstream of that watershed” is being left out of the analysis equation. 14 CCR § 895.1 also states that “Where a watershed exceeds 10,000 acres, the Director may approve subdividing it.” The key word here is “may”. It is not “must”. The use of the tributaries of Battle Creek as imaginary borders only serve to allow SPI to continue to clearcut on a much larger scale than would be allowed by using the boundaries of the part of the actual watershed that is the site of the contiguous projects and analyzing the true impacts of that large contiguous block of projects. The lack of an honest and inclusive evaluation of these impacts betrays the intent of the rules and regulations that exist and fails to protect the public trust resources. “[A]n agency may not ... [treat] a project as an isolated 'single shot' venture in the face of persuasive evidence that it is but one of several substantially similar operations.... To ignore the prospective cumulative harm under such circumstances could be to risk ecological disaster.” (*Whitman v. Board of Supervisors* (1979) 88 Cal. App. 3d 397, 408.)

In each of the THPs shown in Figure 1 and 2, SPI asserted that it only enters a watershed every 10 years. This is clearly another way to obscure the truth of their practices. They game the system by using the planning watershed boundaries to pretend they are not continuously in the watershed, using the same roads and waterholes, fragmenting habitat, and reducing canopy cover thereby making the local climate hotter and drier in fire season. The truth is: they have not been **out** of the watershed for two decades, 20 years, the length of a human generation.

**Inadequate maps that obscure the true scale of effects**

The natural environment can only be understood by realizing how interdependent all systems of it are. The parts—the plants, the water, the soil, the wildlife, the climate—work together to form the whole. Impacts to an interdependent watershed area, in this case the

upper part of the Battle Creek watershed where the contiguous THPs shown in Figures 1 and 2 lie, cannot be dismissed as "insignificant".

CEQA requires an agency to "use [their] best efforts to find out and disclose all that [they] reasonably can" to adequately evaluate a project's impacts. (14 CCR § 15144.) This THP fails to do so by the exclusion of complete maps and information regarding the extent and number of contiguous projects and by narrowing the scope of the assessment area. When, as in this THP, the information does "not 'adequately appraise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences of a project,' informed decisionmaking cannot occur under CEQA and the [THP] is inadequate as a matter of law." (*Communities for a Better Environment v. City of Richmond (*2010) 184 Cal.App.4th 70, 82-83.)

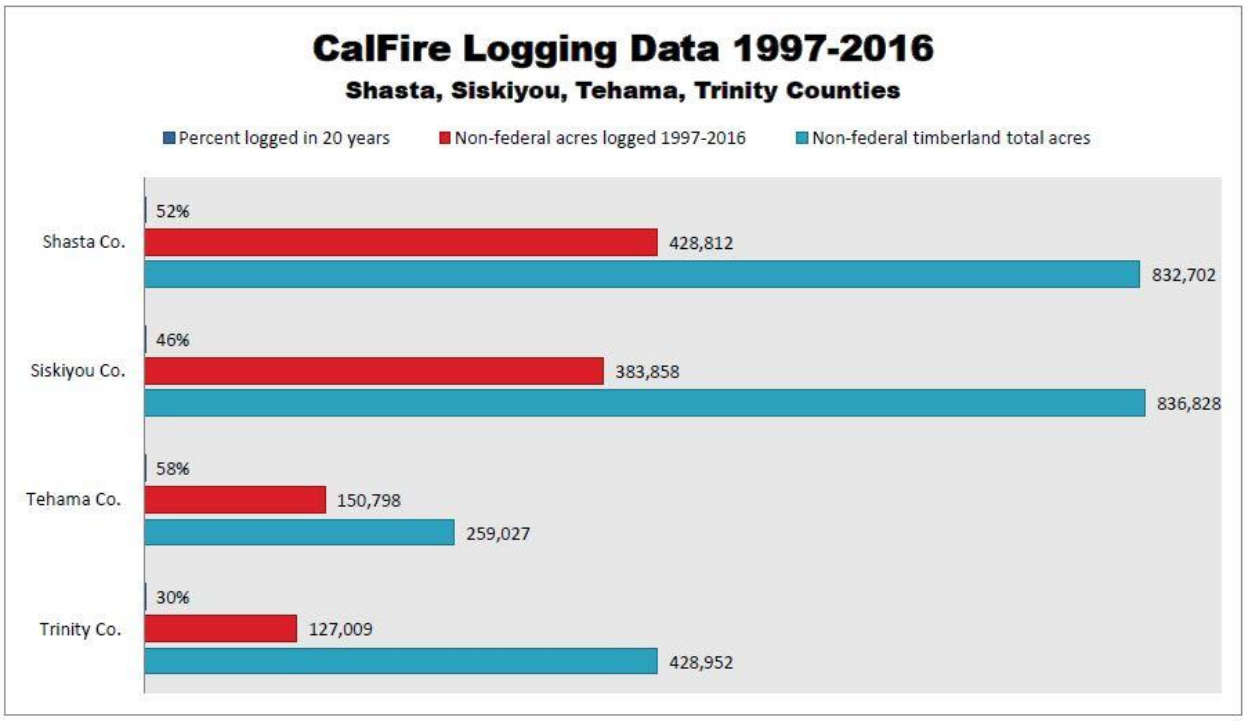
The lack of comprehensive, inclusive maps conceal the total cumulative impacts from the Timber Harvest Review Team's partner agencies. Unless these agencies are given information that is not included in the THP, the only maps they see are maps that show the units of the individual project by themselves with no honest representation of the surrounding, contiguous units from other projects. In the case of *Environmental Protection Information Center, Inc. v. Johnson* (1985) 170 Cal. App. 3d 604, the court "held the department [CDF] was guilty of prejudicial abuse of discretion in failing to consider the cumulative impact of past logging activities, combined with the proposed harvest on the ecology of the grove." Incomplete, omitted and misleading information can only lead to misinformed and spurious decisions that are contrary to law.

**Significant impacts**

"Significant effect on the environment" is defined by the CEQA guidelines as "a substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance." (14 CCR § 15382**.**)

The underlying purpose of cumulative impacts analyses is to provide a public agency with information to understand the long-term impacts and consequences of its decisions, before approving an irreversible course of action. It is another way to prevent the approach of taking a bit here, a bit there, until nothing is left. One Court of Appeal stated that an insufficient cumulative impact analysis "avoids analyzing the severity of the problem and allows approval of projects, which, taken in isolation, appear insignificant, but when viewed together, appear startling." (*Kings County Farm Bureau v. City of Hanford,* (1990) 221 Cal.App.3d 692, 721.)

Figure 6 is the startling amount of logging in four counties, including Shasta and Tehama county where the Battle Creek watershed is situated. The data was obtained from Cal Fire's publically available records in Sept. 2017.




- Data was not available to add tens of thousands of post-fire salvage logged acres. Data does not include logging on Federal ownership.
- Data includes all private ownership within the counties. Logging methods include clearcutting and selection logging.

**This high level of forest loss has occurred within 20 years during climate change and drought. Although state law requires the cumulative impacts of multiple projects be avoided, the cumulative impacts of this high percentage of loss have never been analyzed or addressed.**

**Over 1 million acres of mature forest are gone in 4 counties alone. The shade, humidity, and evapotranspiration process that cools climate and creates rain, gone. The habitat for thousands of species of animals and plants, gone.**

**Fig. 6.** ↑

## Habitat Fragmentation

This THP will add more burden to the already large load of habitat fragmentation in the watershed. The limited area of the CIAA and the BIAA used in this THP is misleading and factually false regarding the cumulative impacts to functional wildlife habitat which have already occurred. The addition of this THP will increase those cumulative impacts. The incomplete, misleading CIA in this THP supplies insufficient information for the Review Team to thoroughly understand and evaluate the significant environmental impacts.

CCR 14 897(b)(1)(B) requires functional wildlife habitat to be maintained in sufficient condition for continued use by the existing wildlife community within a watershed. There is nothing in this THP which provides evidence that is occurring. This THP virtually ignores known science, while only providing generalizations.

There is constant, new mounting evidence of the ill effects of habitat fragmentation which is ignored by this THP's CIA. The 2016 paper by Tuff et al. is a good example of what up to

date science says: "Habitat fragmentation is one of the greatest contributors to biodiversity loss worldwide (CBD 2010) and increasing rates of fragmentation underscore the importance of understanding the full spectrum of its ecological consequences (Haddad et al.2015)." (Attachment 10.)

Haddad et al. (2015) also states: "We conducted an analysis of global forest cover to reveal that 70% of remaining forest is within 1 km of the forest's edge, subject to the degrading effects of fragmentation. A synthesis of fragmentation experiments spanning multiple biomes and scales, five continents, and 35 years demonstrates that habitat fragmentation reduces biodiversity by 13 to 75% and impairs key ecosystem functions by decreasing biomass and altering nutrient cycles. Effects are greatest in the smallest and most isolated fragments, and they magnify with the passage of time. These findings indicate an urgent need for conservation and restoration measures to improve landscape connectivity, which will reduce extinction rates and help maintain ecosystem services." (Attachment 11.)

BCA has State and Federal permits to rescue and rehabilitate raptors (eagles, hawks, owls, falcons). As wildlife rehabilitators, we see many birds who are injured and broken beyond repair due to habitat loss and fragmentation. This THP provides a general list of species but is silent about the significant effects it adds to in this particular watershed. In the summer of 2016, we found a dead turkey vulture and a dead juvenile red-tailed hawk on the edges of SPI's clearcut land, within a mile of each other. Both bodies were too desiccated to be tested by the State Wildlife Investigation Lab, but we could determine neither died of being hit by vehicles or being shot. There is no way to know how many birds die in the wild, unknown of, unseen, untested, but habitat fragmentation and chemicals are definite causes which this THP ignores. In the summer of 2017 we had to rescue a fledgling osprey who fell from a nest on another edge of SPI's land. She was affected by the high heat-- the high heat which is exacerbated by the loss of canopy cover and $CO_2$ emissions that this THP will increase.

This THP's generalized species list ignores ongoing losses within populations also. For example, the great horned owl is considered "common" yet the North American Breeding Bird Survey estimates its populations have declined 33% between 1966 and 2015. There are many figures such as this that this THP ignores completely while it touts there are no "significant impacts".

**CEQA and Environmental Review of THPs**

A Timber Harvest Plan is the functional equivalent of an Environmental Impact Report ("EIR") that non-timber projects would prepare under the requirements of CEQA. (*Sierra Club v. State Bd. of Forestry* (1994) 7 Cal.4th 1215, 1230-1231.)

The Supreme Court has called an EIR the "heart" of CEQA, likening it to an "environmental alarm bell" that provides the essential service of alerting the public and decision-makers to ecological changes before they occur. (*Laurel Heights Improvement Ass'n v. Regents of University of California (1988)*, 47 Cal.3d at 392.) "CEQA is a comprehensive scheme designed to provide long-term protection to the environment." (*Mountain Lion Found. v. County of Kern* (1997) 16 Cal.4th 105, 112.) "The foremost principle under CEQA is that the Legislature intended the act 'to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory

language.'" (*Laurel Heights Improvement Ass'n v. Regents of University of California* (1988) 47 Cal.3d 376, 390.)

One project's environmental effects can be "individually limited but cumulatively considerable." (Cal. Code Regs., tit. 14, § 15065, subd. (a)(3). "Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." (*Id.* § 15355, subd. (b).) *Kings County Farm Bureau v. City of Hanford*, 221 Cal.App.3d at 718 remarked: "thousands of relatively small sources of pollution [can] cause a serious environmental . . . problem." The narrowed and myopic CIA that SPI has submitted for this THP does not meet the CEQA Guideline, § 15088, subd. (b) "…Conclusory statements unsupported by factual information will not suffice." The Forest Practice Rules state: "The Director shall disapprove a plan as not conforming to the rules of the Board if…there is evidence that the information contained in the plan is incorrect, incomplete or misleading in a material way, or is insufficient to evaluate significant environmental effects." (14 CCR 898.2(c).)

**Significant effects which the THP has made no attempt to quantify**

Where are the measurements for these cumulative impacts which this THP will add to? :

1. How much carbon sequestration has been lost here by the removal of grown trees and root systems, and the soil disturbance which has occurred on 1/3rd of the timberland?

2. How much total soil carbon has been emitted by these practices on the ~30,000 acres within this watershed?

3. How many tons of $CO_2$ have been emitted by the logging equipment on site, and the transport of the timber materials, including whole trees and chips? How many tons of $CO_2$ have been emitted by the burning of "unmerchantable" biomass on site and at nearby mills?

4. How much has the average temperature changed in this watershed since 1997?

5. How many tons of sediment have been produced and moved from the logged ~30,000 acres by way of the tributary streams into Battle Creek and consequently into the Sacramento River?

This is a video from USFWS Coleman Fish Hatchery personnel in the lower part of Battle Creek watershed, which demonstrates downstream sediment effects in Battle Creek: https://www.facebook.com/NWSCNRFC/videos/813279955397918/

**Conclusion**

It has not been our experience in the past that former Review Teams were interested in hearing what we say. Nevertheless, we are available to answer any questions or provide more documentation. We have much more documentation regarding our water data. We

would appreciate being asked about it before it is summarily dismissed in your Official Response, as has occurred in the past.

This is the first SPI THP to be filed here since the Ponderosa Fire in 2012. The watershed is still unraveling from the years of clearcutting prior to that fire, and from the post-fire salvage logging that followed it. Climate change is adding further stressors to all the irreplaceable biological resources that support life. SPI's decades-long repetition that its practices have no significant effect must be rejected by the regulatory agencies tasked with protecting the environment. We have made a good faith attempt to provide evidence which disproves that and demonstrates ecological disaster is occurring. This plan must be rejected.

Marily Woodhouse, Director

battlecreekalliance@gmail.com

**List of Attachments**

1. Excel spreadsheet from Cal Fire database of logging projects in Battle Creek watershed.

2. 2013 Tom Myers review of SPI's Post-Fire Sediment document
http://nebula.wsimg.com/83bd6de31f359b050bbb5eec36bb998f?AccessKeyId=01B8D7A67C3CF9F65262&disposition=0&alloworigin=1

3. 2016 Jack Lewis review of SPI's Post-Fire Sediment document
http://nebula.wsimg.com/aa5a4911ce3802a3c5901dd13843a9da?AccessKeyId=01B8D7A67C3CF9F65262&disposition=0&alloworigin=1

4. 2016 Water Temperature Analysis of BCA Data by Jack Lewis
http://nebula.wsimg.com/f9ea2262ab0a1d9f83bb12d97eb1ebb2?AccessKeyId=01B8D7A67C3CF9F65262&disposition=0&alloworigin=1

5. CSPA analysis 2011
http://nebula.wsimg.com/1b7d46bf0c6a12ec56b65ba29f975105?AccessKeyId=01B8D7A67C3CF9F65262&disposition=0&alloworigin=1

6. Tom Myers analysis 2012
http://nebula.wsimg.com/6c9ef0040c173fe571d464629bab1fcd?AccessKeyId=01B8D7A67C3CF9F65262&disposition=0&alloworigin=1

7. Jack Lewis analysis 2014
http://nebula.wsimg.com/f65f0fa520ec0c113b3e880b52fd565a?AccessKeyId=01B8D7A67C3CF9F65262&disposition=0&alloworigin=1

8. Jack Lewis, Jon Rhodes, Curt Bradley analysis 2016*

9. USFWS Matt Brown letter http://www.battle-creek.net/docs/gbcwwg/USFWS_MemoIncreaseInFneSedimentSouthForkBattleCreek_final.pdf

10. Tuff et al. (2016)

11. Haddad et al. (2015)

**Additional Attachments**

*2016 Figures

*2016 Supplemental Figures

*Jack Lewis rebuttal of Pete Cafferata/Drew Coe review of 2016 paper

Battle Creek Alliance Additional comments on THP 2-17-070SHA 1/30/18

We see that the Review Team has recommended this plan be approved as having no cumulative impacts. (Posted on FTP site yesterday ftp://thp.fire.ca.gov/THPLibrary/Cascade_Region/THPs/THPs2017/2-17-070SHA/20180126_2-17-070SHA_RTCRecs.pdf .)

This statement regarding the the lack of a response from the Forest Service is in the Artemis THP's Past Projects section:

**Past Projects**
**Artemis THP CIAA:**
**Upper Digger Creek PW** plus one mile radius from harvest units.

| THP# | Landowner | Silviculture | Yarding Method | Acres | Source |
|---|---|---|---|---|---|
| 2-03-158-TEH | SPI | CC/CT/SHWR | Tractor/Skidder | 993 | SPI |
| 2-04-166-TEH | SPI | CC/ALT | Tractor/Skidder | 158 | SPI |
| 2-04-181-TEH | SPI | CC/CT/ALT | Tractor/Skidder | 942 | SPI |
| 2-10-003-TEH | SPI | CC/ALT | Tractor/Skidder | 234 | SPI |
| 2-EM-106-SHA | SPI | Fire Salvage | Tractor/Skidder | 200 | SPI |

The USFS Lassen National Forest Hat Creek and Almanor Ranger Districts administer lands within the CIAA adjacent to portions of the THP area. Harvest operations by the USFS have been conducted during the past ten years but no response has been provided to a request of information on past projects size or silviculture.

Approximately six miles of contingency fire line was constructed on portions of the G Line and A Line seasonal public road portion and seasonal mainline road portion within SPI ownership during the Ponderosa Fire in August 2012. This consisted of dozing brush and trees >18" DBH on one side of the roads in a swath approximately 100 feet in width. Rehab of this fireline was completed in 2012.

Approximately seven miles of roadside mastication was conducted in the winter of 2016-17 on the F Line and A Line Seasonal Public and Seasonal Mainline roads on SPI ownership for the purpose of a fuel break.

SPI has conducted manual Pre-Commercial Thinning (PCT) operations on approximately 566 acres within the CIAA.

We've seen this statement in other Battle Creek THPs in the past also and asked why there was no follow up. The questions were ignored.

This brings up these questions:

1. Isn't it CDF's job to review the THPs for accuracy and completeness?

2. How many Battle Creek SPI THPs has this statement been included in, and accepted without question by CDF?

3. How many SPI THPs statewide has this statement been included in, and accepted without question by CDF?

4. When so much of SPI's land is checker boarded with national park and forest land, aren't nearby projects an important and legally required part of the CIA? Why did CDF not require SPI to produce the information?

5. How many Battle Creek and statewide THPs have been approved by CDF with this statement in them?

6. Hasn't CDF ever noticed how much of the CIA sections in SPI's THPs are exactly the same in THP after THP? If they have noticed, what action did they take?

7. By law, the THP is supposed to be the equivalent of an EIR. Are EIRs copied and pasted over and over again for numerous projects? Are EIRs approved when part of the information has not been included?

## 2nd Additional Comments 1/31/18

Battle Creek Alliance has some additional questions and remarks to submit.

In our experience with submitting public comments in the past, we have seen the Review Team issue their recommendation to approve a plan as having "no significant unmitigated cumulative impacts identified" before the close of the Public Comment period. This has occurred with this THP also. The date listed as the close of Public Comment is Feb. 5th, 2018 on the Review Team's recommendation letter. We submitted our main comment on January 26th, 2018. The Review Team's recommendation letter is dated January 26th also, which means they reviewed none of our evidence which is specific to the Battle Creek watershed, before making their decision. This pattern of behavior suggests to us that the Review Team does not act in an inclusive and unbiased manner in their review process, particularly in regard to a fair consideration of public comments.

The answers to these questions may reveal Review Team bias in favor of the Timber Industry:

1. How many industrial timberland THPs have been filed with the Redding Timber Harvest Review Team since 1997?

2. How many of those plans did the Review Team recommend for approval before the close of the Public Comment period?

3. How many of those THPs have said they have significant cumulative impacts identified?

4. How many of those plans have been approved? How many of those plans have not been approved?

## 3rd Comment 2/2/18

Additional comments and questions from Battle Creek Alliance:

The SPI THPs which have been filed in the Battle Creek watershed since 1997, including this one, have all been written by Registered Professional Foresters (RPFs) in the employ of SPI. Essentially this means that each THP hinges on one person's choice of the area to analyze for cumulative impacts. That one person is in the employ of the industry that is supposed to be regulated by the publicly-financed regulatory agencies. The RPFs have consistently chosen the planning watersheds, which do not conform to CEQA's laws. We have attempted to ascertain the training and background of the RPF who wrote this THP, but have found no available source for that information.

In past comments for other THPs we have submitted the University of California Committee on Cumulative Watershed Effects report "A Scientific Basis for the Prediction of Cumulative Watershed Effects" usually referred to as Dunne et al. 2001. This blue ribbon panel was selected for their watershed expertise. One of this committee's findings was: "Information provided in individual THPs that we examined was often incomplete or too subjective to assess current resource conditions, lingering cumulative effects, or the potential for additional impacts. The boundaries of the assessment areas are arbitrary, and may be limited to that landowner's property...Our reviews of THPs and discussions with CDF officers responsible for reviewing applications **indicate that the training of Registered Professional Foresters is not adequate for the multidisciplinary assessments of CWEs [cumulative watershed effects]."**

With this in mind, we ask the Review Team these questions:
1. What is your rationale for depending on one RPF to adequately perform a cumulative watershed impacts assessment?

2. What is your rationale for allowing the timber company to arbitrarily always use planning watershed boundaries to limit the scope of their legally required cumulative watershed impacts assessment ? We cannot find a specific rule or law that legally requires it.

3. What training does the RPF who wrote this plan have in hydrology, watershed ecology, wildlife biology, and botany? If he is competent in these fields why is most of the cumulative impacts assessment copied and pasted from other THPs?
PRC § 752 (b) states:

A professional forester is licensed to (b) perform forestry services only in those areas of expertise in which the person is fully competent as a result of training or experience.

## 4th Comment 2/4/18

The reason BCA began collecting water quality data was because when we started working on watershed issues in 2007, we found that none of the public agencies involved in the timber harvest review process were collecting any regular data to track what changes were occurring from ongoing logging. We found it inconceivably negligent, and still do, that the massive landscape changes could be approved with no idea what kind of effects were being caused by those changes.

The pre-harvest inspection (PHI) for this THP entailed one day of the Review Team members going out to the area. Let us emphasize that: one day. One day to gauge the effects of an addition of 942 more acres of clearcutting to 20 years and ~30,000 acres of deforestation. This is the standard practice. The recommendations from that one day visit were primarily for adding some larger culverts near the creeks and more rocks around them. CDFW did recommend further habitat fragmentation analysis, but confined it to the planning watershed. SPI's response

to that recommendation sidestepped the issues by narrowing the scope of their answer to a few paragraphs and adding more generalized lists and charts while talking about a 10 year time frame. ftp://thp.fire.ca.gov/THPLibrary/Cascade_Region/THPs/THPs2017/2-17-070SHA/20180125_2-17-070SHA_2ndRTRecs-RespRPF.pdf

Cumulative impacts do not look at a calendar and say "Oh, 10 years! Our time is up!" There has been no attempt whatsoever to quantify plant and wildlife species populations, and track whatever trends have occurred over the time this watershed has been impacted. SPI provided no data from the real world to support their claims that there are no effects from their practices, yet the Review Team recommended approving the plan as having no cumulative impacts within 2 days of receiving SPI's non-response.

We have provided data (and analysis) collected from the real land this THP is planned for. It shows ongoing effects. This is not a difference of opinion. This is a difference between real world data and empty words on paper.

Please see the attached expert opinion letter from statistical hydrologist Jack Lewis.

## 2/5/18 Additional Research

Battle Creek Alliance would like to add these 2 recent research papers to our comments as evidence to support statements and concerns in our comment. The THP and the Review Team seem to disregard recent science.

The 2017 Ellison et al. paper speaks of the importance of grown forests to the water and carbon cycle. Excerpt:
"Trees, forests and water: Cool insights for a hot world
The substantial body of research we review reveals that forest, water and energy interactions provide the foundations for carbon storage, for cooling terrestrial surfaces and for distributing water resources...

Deforestation and anthropogenic land-use transformations have important implications for climate, ecosystems, the sustain-ability of livelihoods and the survival of species, raising concerns about long-term damage to natural Earth system functions (Steffen et al., 2015). Mean warming due to land cover change may explain as much as 18% of current global warming trends (Alkama and Cescatti, 2016). Deforestation exerts an influence on warming at the local scale and alters rainfall and water availability, not to mention the emission of greenhouse gases. Though we eschew precise definitions of tree and forest landscapes herein, plantation forests and the use of some more exotic species can upset the balance of evapotranspiration regimes, possibly with negative impacts on water availability (Trabucco et al., 2008). Moreover, re- and afforestation, particularly in the context of climate change, rising temperatures and diminishing rainfall, can further reduce water availability."

The 2018 Harden et al. paper examines soil carbon and soil organic matter. The THP and Review Team essentially pay no attention to these important aspects of land use, or the ongoing cumulative impacts related to them. What has been cut from the ~30,000 acres of timberland here is mostly second growth forests. The old growth forests were all cut in the late 1800s to early 1900s. The primarily single species tree plantations which have replaced the grown forests are the

third rotation in approximately 100 years. Soils take centuries to form, even in mild and optimal climates. Ignoring the cumulative impacts of this continuing soil disturbance and loss on the soil, carbon, and water cycles is insupportable.

Excerpt from Harden et al. 2018:

"Soil organic matter (SOM) supports the Earth's ability to sustain terrestrial ecosystems,
provide food and fiber, and retains the largest pool of actively cycling carbon.
Over 75% of the soil organic carbon (SOC) in the top meter of soil is directly affected by human land use.

Increases in SOC play a key role in climate regulation through sequestration of CO2, but there also co-benefits relevant to land managers through increased land yield, soil water retention, resilience to extreme weather, and nutrient retention."

5th Comment 2/5/18

Today is the close of of the public comment period for this THP. Battle Creek Alliance's final comments follow.

CDFW stated in their letter regarding the pre-harvest inspection:
There is no known documentation of anadromy within Digger Creek and South Fork Digger Creek…The THP is likely located upstream of the migration limit of steelhead and chinook salmon due to the low seasonal flows, channel size/width, and existing CDFW occurrence data.

There is a PG&E dam on Digger Creek approximately 3 miles west (downstream) of SPI's land boundary. No fish can get past it. That is at least one of the reasons there are no fish in that part of the creek.

This highlights another problem with the Review Team's "no significant effects" decision and their recommendation to approve this plan. The Review Team spends little to no time on the land that they are making decisions about. These decisions will have repercussions far into the future. Our shared future deserves decisions which reflect a thorough understanding of the places that support a livable world. The Review Team is under-informed and mis-informed too often, relying on SPI's inadequate, outdated, vague, and misleading cut & paste THPs.

The Review Team recommended approval for this THP before the close of the public comment period and before reading our comments and evidence. The only conclusion we can draw from this is that the public comment period is merely a legally-required formality which the Review Team, in actuality, has no interest in. The recommendation for approving this THP is a mistake which goes against all reason, evidence, and established CEQA law.