



## **REBUTTAL**

In the Matter of Olive Franklin Trustee of the  
Charles A. Franklin & Julia F. Franklin Trust and  
Daniel Franklin  
Sediment Discharges Upper Main- Eel River  
ACLC No. R 1-2016-0033

# Table of Contents

TABLE OF CONTENTS:	
<u>1.a</u>	Case Rebuttal
<u>1.b</u>	Background Narrative
	<b><u>Exhibits:</u></b>
<u>2</u>	Stream Restoration Recommendations, November 25, 2014: Estelle Clifden (RPF), Environmental Consultant, North Coast Resource Management
<u>3</u>	Department of Conservation, California Geological Survey: Memorandum of August 14, 2013: David Longstreth to Stormer Feiler
<u>4</u>	PG&E: Flow Data for the Potter Valley Powerhouse
<u>5</u>	Letter: Simon Addicott, BSC, MBA, Vice-President, GTA Containers Inc., Manufacturer of Flexible Tanks for Aviation and the Military.
<u>6</u>	Statement of Jason Park person responsible for managing Bladder Tank
<u>7</u>	2013-2014 Freshwater Sport Fishing Regulations Effective March 1, 2013 – February 28, 2014
<u>8</u>	Definitions of Beneficial Uses: California Water Quality Control Board
<u>9</u>	Jeff Longcrier, RPF: Non- Industrial Timber Management Plan: NTMP#1-00NTMP-019
<u>10</u>	California Department of Fish and Wildlife (CDFW) Memorandum of May 30, 2013: Rick Macedo to Warden Steven Crawl .
<u>11</u>	Stream Recovery Report, January 2 ,2015: Estelle Clifden, RPF, Environmental Consultant, North Coast Resource Management,
<u>12</u>	Photos from 2015 – 2016 of Affected Stream showing recovery
<u>13</u>	Excerpts from Tank Manual
<u>14</u>	PG&E Powerhouse, Potter Valley: Precipitation Records for April, 2013
<u>15</u>	Declaration of Daniel Franklin
<u>16</u>	Tank Rupture examples: Links
<u>17</u>	Gil Kuhn Appraisals: Appraisal of Potter Valley Property
<u>18</u>	Lisle, Thomas: The Eel River, Northwestern California; High Sediment Yields from a Dynamic Landscape

## List of Exhibits

## Case Rebuttal ACLC R12016-0033

1. Background Narrative
  2. Stream Restoration Recommendations: Estelle Clifden, North Coast Resource Management, November 25, 2014
  3. Department of Conservation, California Geological Survey Memorandum of August 14, 2013: David Longstreth to Stormer Feiler, Pg2 para 3.
  4. PG&E: Flow Data for the Potter Valley Powerhouse
  5. Letter: Simon Addicott, BSC, MBA, Vice-President, GTA Containers Inc., Manufacturer of Flexible Tanks for Aviation and the Military.
  6. Statement of Jason Park, person responsible for managing the tank when it failed
  7. 2013-2014 Freshwater Sport Fishing Regulations effective March 1, 2013 – February 28, 2014,
  8. Water Board definitions of Beneficial Uses:  
[http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/planningtmdls/basinplan/web/bp\\_ch2.shtml](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/bp_ch2.shtml)
  9. Non- Industrial Timber Management Plan: NTMP#1-00NTMP-019
  10. California Department of Fish and Wildlife (CDFW) Memorandum of May 30, 2013: Rick Macedo to Warden Steven Crowl .
  11. Stream Recovery Report: Estelle Clifden, North Coast Resource Management, Exhibit#11
  12. Photos from 2015 – 2016 of Affected Stream showing recovery
  13. Excerpts from Tank Manual
  14. Precipitation Records for April, 2013 from PG&E Powerhouse, Potter Valley
  15. Declaration of Daniel Franklin
  16. Links to Tank Rupture examples:  
<HTTP://www.ledger-enquirer.com/news/local/article29052847.html>;  
<http://sache.org/beacon/files/2007/02/en/read/2007-02-Beacon-s.pdf>;  
<http://themonitor.net/blog2/wp-content/uploads/2014/12/water-tank.jpg>.
  17. Gil Kuhn Appraisals: Appraisal of Potter Valley Property
-

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18. Lisle, Thomas: The Eel River, Northwestern California; High Sediment Yields from a Dynamic Landscape
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The Water Board vs Dan Franklin and the Charles and Julia Franklin Trust, Olive Franklin, Trustee  
Case Rebuttal ACLC R12016-0033

**List of Witnesses:**

1. Estelle Clifden, Registered Professional Forester, North Coast Resource Management



Background:

The Franklin Family Trust was created by Charles and Julia Franklin to benefit their grandson, Daniel Franklin. They were not wealthy people; their trust's only asset was their home in Oakland. Upon their deaths, I, Olive Franklin, became trustee of the trust.

In 2003 the house in question was sold and the proceeds used to buy property in Mendocino County – 250 acres of raw timberland which had been logged in the 1990s in a remote location with a small border on the Eel. The property acquired consisted of the and a house in Willits – which was heavily mortgaged. The trust currently has no money. Just the properties.

The property in Willits has been slowly paying down its mortgage, but, since the 2008 real estate crash, the appraised value of the property has decreased by about \$150,000 to about \$150,000. Additionally, in the past several years, renters have been a terrible problem: damaging the house, not paying rent, requiring eviction. To keep the mortgage current, I have often had to supplement the trust out of my own pocket. Not being on-site, trying to manage the trust from England has been more difficult than I had imagined.

Daniel's real love has always been the land in Potter Valley. He never wants to log it, never wants to develop it, never wants to displace the natural world. He would like to build a house for himself on that land, but has never been able to afford to do so.

Access to the land has always been a problem. For years after a natural washout, the Forest Service, then maintaining the M-8 road, could not afford to repair it. Having no other access, Dan could only reach the land by fording the Eel. When finally the road was reopened, the Forest Service abandoned it, and it became a private road, and the maintenance of it fell to PG&E, Daniel and a third landowner.

What money he did have was used for necessary maintenance on the land. He worked on the land, thinning, clearing, and after an accident on his quad resulted in injuries to his neck, back and shoulders, he could not continue.

In 2009, after a terrible fire season, I began to worry about loss of the asset that the timber on the land, still too young to be merchantable, will be. I reread the Non-Industrial Timber Management Plan (NTMP) done by Mr. Longcrier in 2000 for the previous owners, and took seriously his warnings about the danger of wildfire in that locale.

On page 53 of the NTMP, Mr. Longcrier wrote under a heading called Hazard Reduction: "Fire has been a major factor affecting the condition of the forests throughout the area." In section b. Mr. Longcrier recommends the "Development of Emergency Water Supplies".

I strongly recommended Dan find some way to store a useful amount of water (for fire suppression) on the land. As the land is steep and rugged, no pond for water storage could be constructed. But at that time Army Surplus Water Bladders began to be available – sold on the roadside in Potter Valley for much less than rigid tanks.

In an article comparing types of water tanks, and discussing the pros and cons of each (see [http://www.californiaconcretewatertanks.com/Water\\_Tank\\_Comparisons.html](http://www.californiaconcretewatertanks.com/Water_Tank_Comparisons.html)), the information reads as follows: "The tanks are light, you only need a sand base to place them on, they come in a wide variety of colors and have a long serviceable life. Many poly tanks carrying a 25 year warranty, although many claim 15 years is a very realistic lifespan."

As a rigid tank would have to have been placed on some sort of platform on such a hillside, we worried about platform collapse.

It appears our concern was justified. The abstract of a current publication directed at Engineers designing tanks and titled: Earthquake Performance Comparison Of Different Forms Of Elevated Water Tanks begins by saying:

"Elevated water tanks are of prime concern in any locality, in case of an earthquake. So their design is also important. Studies have revealed that most of the elevated tanks collapse due to the collapse of their supporting structure (staging) .The staging has to be designed to take lateral forces, and also ductility has to be ensured. "

(International Journal of Engineering Trends and Technology (IJETT) © 2016 by IJETT Journal Volume-38 Number-7 Year of Publication : 2016 Authors : Joyce Thomas)

We were aware that other water tanks may have their issues as well. Here are some examples from the interne: <HTTP://www.ledger-enquirer.com/news/local/article29052847.html>;  
<http://sache.org/beacon/files/2007/02/en/read/2007-02-Beacon-s.pdf>;  
<http://themonitor.net/blog2/wp-content/uploads/2014/12/water-tank.jpg>.

We also were concerned, about the danger of rupture of tanks in earthquakes. I had read an article in a publication by Friends of the Eel which had evaluated various kinds of water storage tanks. They had nothing bad to say about the flexible tanks, and rated them particularly highly against earthquake hazard. It said that a flexible tank, properly installed would, in an earthquake, just jiggle. Not rupture or collapse. We thought it would be a perfect solution.

So, given the issues, a water bladder was installed. The tank was installed properly on what had been an old log deck (a previously graded platform where logs are stacked for loading). No grading had to be done. Just clearing. And, just to be safe, Daniel dug out a depression in the deck about 3 ft. deep in which to set the tank and used the material he dug out to construct and compact a 2-3ft Berm around the tank – an added protection in case of leakage or failure. He then added a deep layer of sand to protect the tank from stones or other sharp things in the ground, and dug a channel in which to run a large pipe to empty the tank if needed. All this before laying the tank.

The water, which was collected during the rainy season, was for fire suppression. Not for any other purpose. At most it would have been back-up if the two small tanks would not suffice. We thought we were being exceptionally prudent.

Surely you can see that if Dan had been a 'bad guy' he wouldn't have, immediately upon discovering the problem, gone to inform Fish and Wildlife. If Daniel had not self-reported, I don't think we would be here, but, instead of being praised for the good things he did: properly installing the tank for fire suppression, self-reporting, and doing all that he could to undo the damage and prevent further erosion. For all that effort, we are hit with a huge fine and a 1.25 culpability score. Had he known that no good deed goes unpunished, he wouldn't have welcomed the inspection team onto

the property to view the damage and ask for their help in guiding his restoration work. If he were a less honest and responsible person, he would have covered it up; denied it; refused any responsibility; or simply disappeared. Instead, it is only because he has behaved as a good and environmentally conscious person that he is being punished. Is that really the example you wish to set?

The facts of this case have been muddled by Cannabis. But Cannabis is a total Red Herring. It had nothing to do with the water bladder. It was unrelated to the failure of the bladder and the escape of the pure spring water therein. As the Inspection Team documented in their photographs, there was none growing on the property at the time of the incident.

Daniel is an idealist. A hopelessly generous and kind person. When friends developed medical problems he saw he could help by allowing a collective to form and grow on his land to meet their medical needs as well as his own.

Daniel is not a bad actor. He has committed none of the environmental crimes one has been taught to associate with the illegal cultivation. The garden was organic. Built on another former log deck, no damage to the environment was done in its creation. It was within allowable limits. The Recommendations for each person who was a member of the collective were posted. The harvested crop was not sold

About 7 people, at least two of them now deceased, grew their medicine on his land. None was to be sold. It was all done 'legally'. The garden was totally organic – no pesticides or herbicides.

I, as trustee, knew nothing of this. I could not have allowed it. The first I knew of the collective or its garden was 18 months after the water bladder burst when I received notice that the Water Board was pursuing an Administrative Liability Claim against Daniel and the Trust.

On April 24<sup>th</sup> or 25<sup>th</sup> the water bladder failed. We do not know exactly why, although the Tank Manufacturer is convinced it was caused by a puncture of the tank by some unknown sharp object.

Daniel did not live out on the property and in fact, could not get out there, sometimes for a week at a time. He was told by of the debris flow onto the road by a neighbour and when he went out to check on the situation he reported it to Fish and Wildlife. And then set about trying to do what he could to remediate things. He asked the Inspection Team for their recommendations and followed them.

One of the problems was the sediments which had blocked the culvert and filled its approaches, then proceeded to settle onto the road and down the ditch that carries water to the next culvert. He cleared debris, and arranged for a skilled operator, Pechon Ramus, to come in with a back-hoe to clear the road and unblock the culvert. (I know this happened because Daniel had no money and so I arranged for a cashier's check to pay for it.) He cleared the drainage ditch and the road, moving the sediments which had been filling the drainage ditch on the inside side of the road to and extending well onto the road surface to the uphill side of the road and stabilizing them there to keep them from washing into the River in the next rains. The problem as it existed is visible on the road in many of the Inspection Team's photographs.

Since then the watercourse has regenerated and the only noticeable difference from the days before the tank failed is the lovely work done on the culvert under the M-8 at the Affected Stream.

This has all been very distressing. Especially as we had not expected to be accused of such awful things. We were not negligent. We did not knowingly or willingly do environmental harm. Neither Daniel or the Trust benefitted financially.

To clarify my position, under California's Probate Code sections 18001 and 18002, a trustee can only be personally liable if found to be personally at fault. Courts don't allow a creditor to look either to the assets of the trust or to the trustee's personal assets for payment of the judgment without having to demonstrate personal fault on the part of the trustee. Here, I, Olive Franklin, acted only in a representative capacity as trustee and none of the proposed penalty should be directed towards my personal assets. I was unaware of the events that took place until after the fact and had no personal responsibility. The only connection to the trust is the fact that the land is owned by the Trust.

In the accompanying document I have set out to present my son's case – which gives a very different, and more accurate picture of the situation.

Thank you in advance for your consideration of our submission.

Olive Franklin, Trustee .



**Rebuttal to Prosecution Case in Chief in the Matter of Olive Franklin, Trustee of the Charles A. and Julia F. Franklin Trust, and Daniel Franklin**  
**ACLC No. R1-2016-0033**

**Alleged Violation:**

Mr Daniel Franklin and The Franklin Trust are alleged to have violated section 301 of the Clean Water Act and Water Code section 13376, described below by discharging at least 50,000 gallons of “sediment-laden water” from a tank put in place for Fire Protection, without obtaining coverage under an NDPES permit.

Response: Mr. Daniel Franklin and Olive Franklin, Trustee, contest this allegation.

In specific we challenge the following:

**I. Water of the United States**

We believe the Affected Stream is not properly classified as a Water of the United States, and is therefore not regulated by federal law. This brings into question the jurisdiction of the Water Board under the Clean Water Act over the accidental escape of pure water into this runoff channel

To meet the definition of a Water of the United States a stream must have a ‘significant nexus’ with a Water of the United States. This watercourse does not meet the criteria of a Significant Nexus.

A. Additionally, the affected stream is not "relatively permanent" and does not have a "continuous surface connection" to a Water of the US. (Ref. the Scalia plurality test in the Rapanos case.)

B. It does not exist on **any** USGS map of any scale.

C. It does not exist on the Stream Stat interactive map.

D. It does not exist on the Mendocino County Maps, and does not exist on the North Coast Regional Basin Plan.

E. It is an episodic and ephemeral Class III stream (Ref: Exhibit #9: Non-Industrial Timber Management Plan: NTMP#1-00NTMP-019). It contains water only during and directly after a persistent or particularly heavy rain event on previously saturated ground. Water is present in the watercourse only until the immediate rainfall amount has been exhausted - no more than 2 or 3 days post rainfall. Even during the rainy season there are very few days in which there is any flow at all.

Outside of major storm or high flow events, runoff from this channel does not reach the Eel River. Ordinarily, what little flow there is, is absorbed into the ground well before reaching the now private road formerly known as the M-8, itself 130 ft. from the Eel.

Evidence the photographs taken by the Inspection team: North Coast Regional Water Quality Control Board (NCRWQCB), California Department of Fish and Wildlife (DCFW) and the California Geologic Survey at their May 24, 2013 visit to the property: The streambed in the photographs can be seen to be dry. (See Complaint

Inspection Report, Exhibit 1C , and Exhibit 9: 2013-05-24 M-8 Water Bladder Failure Inspection Photos photos, both part of and included in Water Board's Case in Chief.)

## II. Discharge of Pollutants

When the tank failed pure water escaped. This impounded water contained no pollutants or waste. Case Law: [http://www.accotink.org/Accotink\\_Case\\_Decision.pdf](http://www.accotink.org/Accotink_Case_Decision.pdf)

A. There was no "discharge of pollutants" from the bladder, just water. The impacts discussed in the complaint relate to the high volume and speed of flow of the water, these are not regulated under the Clean Water Act.

B. There was no sediment in the water until it flowed across the ground, initially as a sheet, and finally reached the stream channel. The sediment in the stream was mobilized only as the flow reached the stream bed and caused erosion to occur. (See Water Board's Exhibit 8: photos 4473 & 4474)

C. The water bladder is not a point source. The water escaped the bladder and, as stated on Attachment A, pg. 1, had a "dispersed flow path" and then "travelled 30 or 40 feet as sheet flow." This is a non-point source discharge. It is a sheet flow and as such does not require a Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit. Plus they do not issue NPDES permits for an unexpected, unintended, accidental one time discharge. Erosion from sheet flow is not a point source discharge.

D. "EPA has tried its novel approach of regulating sediment via flow in only 4 instances nationwide and all four attempts were challenged in court." (Quoted from Accotink case on page 8.)

## III. Upset Situation

This was an Unforeseeable Accidental event. It was an unintended event. This was closer to an Upset Situation, one of the two defences under the Clean Water Act for situations beyond the reasonable control of the discharger where you know the cause, provide notice of the discharge, and take corrective actions.

We now know the cause: the tank did not burst. It was punctured (see below). There was no intent, and no negligence. See Manufacturer's letter (Exhibit 5) in which he writes:

*"In reviewing the photographs you sent it would appear that the tank did not have a seam failure but was more likely punctured by a sharp object such as a tree limb to wild animal. Once the reinforcing nylon fabric is damaged then an unzipping of the tank can occur from end to end. "*

The 'unzipping' he speaks of seems to be just what happened, and, as it was initiated by a puncture of the fabric of the tank, this can not be seen as negligence.

As soon as we were informed of the tank failure we provided immediate notice of the discharge, and

We took corrective actions: Stabilizing sediments, clearing culverts, doing erosion control work on road surfaces affected by the flow. We hired an experienced back-hoe operator to do this work.

was an Unforeseeable Accidental event.

## A. Potential for Harm:

Potential for Harm to Other Potential or Existing Beneficial Uses is the basis for determining the administrative civil liability amount; in this case the Potential for Harm was assigned a severity level of 8 of a possible 10. (Category: Major (5), + Characteristics of the Discharge (2), + Susceptible to Cleanup or Abatement (1) = 8)

1. This score is not applicable to our situation. Given the realities explored below, this score merits serious reconsideration and recalculation.
2. We contend that the unnamed episodic ephemeral watercourse affected by this accidental tank failure is not a navigable water or a true tributary of the Eel River, and hence not a Water of the United States.
3. **A Harm Factor of 5 not appropriate to our case.** A Harm Factor of 5 is used when there are toxic spills/oil spills, especially intentional ones or egregiously neglectful ones, and/or where birds and fish are killed. That is not the case here. In her report November 25, 2014, recommending Stream Restoration Work, initiated by us, Estelle Clifden, Environmental Consultant at North Coast Resource Management, writes the "areas are naturally healing" and "will not benefit from human disturbance." (See Stream Restoration Recommendations, NCRM Exhibit 2)
4. **The harm was the result of a single instance of an unforeseeable, accidental failure of a tank containing pure water,** the flow from which instigated erosive damage to a small runoff channel leading to the Eel River. But sediments are nothing new in the Eel River. I refer you to *Lisle, Thomas E. "The Eel River, Northwestern California: High Sediment Yields from a Dynamic Landscape" (PDF). United States Forest Service. Retrieved 14 December 2013.*
  - a. The Eel River has the highest per-unit-area sediment yield of any river of comparable size in the continental U.S., excluding those fed by active glacial or volcanic sources.
  - b. The estimated annual sediment load of the Eel River is 16 million short tons, or an average of 4,458 tons per square mile.
5. **We contend that categorizing this spill as Major, with a level of severity of 5 is unsupportable for a spill of pure rain runoff water.** Particularly, as a figure of 1 is used for storm runoff.
6. **We contend that The Potential for Harm of the Physical, Chemical, Biological and Thermal characteristics of the water is greatly overstated.**

The pure spring water impounded in the tank contained no Physical, Chemical, Biological or Thermal characteristics which could be said to present a "Potential for Harm".

  - a. The water in the tank was pure, unpolluted spring runoff water native to that watershed. There were no chemicals present in the water or the tank or in the tank's matrix. (See below)

- b. The tank, on a north-facing slope in late April, would not have had a significantly different temperature from that of the water in the adjacent Reference Stream, or in fact, in the Eel River. It would have presented no thermal shock to the Eel River.
- c. The water escaped over an unknown length of time. We now have information that indicates that the water escaped over a period of 15 to 20 minutes.
- d. The Complaint speaks in detail about the Total Maximum Daily Load (TMDL) established for the Main Stem Eel River (see p3, #8). Despite the intimation of violation, that leads the reader to believe that this accidental tank rupture was responsible for exceeding the 20%.
- i. The water of the Eel River was deemed impaired prior to this event.
  - ii. Despite the intimation of violation of the TMDL, there is no evidence that the TDML was exceeded.
    - (a) The tank water did not contain any pollutants or sediments. Any and all sediments and debris were picked up as the pure water flowed over the ground and down the channel, and were therefore 'native' to this slope and can not be considered pollutants.
    - (b) The Department of Fish and Wildlife does not measure turbidity at Cape Horn Dam. Mr. Macedo's statement about exceeding the TMDL must have been speculative.
    - (c) Flow data on the Eel River during the period when the spill occurred show that the rupture and resultant escape of the water could not possibly have washed enough sediments into the Eel River to cause an excess of the TMDL for the Upper Main Stem Eel. (See PG&E Powerhouse records Exhibit 4.)
      - (1) PG&E flow data for the 23<sup>rd</sup>, 24<sup>th</sup>, 25<sup>th</sup> of April document at least 50,000 gallons of water flowing through the Potter Valley Power House every 2 minutes! (The tank rupture occurred on night of the 24<sup>th</sup> - 25<sup>th</sup>)
      - (2) Considering the fact that the Potter Valley Project takes a relatively small portion of the flow of the Main Stem Eel River, the flow of the Eel River as it passed the point where the spill entered the Eel, would have been much greater. At this greater flow rate, whatever sediment entered the Eel River over the 15 – 20 minutes duration of the spill (See Letter from Simon Addicott Vice-President, GTA Containers Inc., Exhibit 5), would have been diluted virtually instantaneously and, certainly by morning only the lightest and most flocculent sediments (ex. forest duff) would have been in suspension. (The unknown event which punctured the tank occurred somewhere between 2230 on the 24<sup>th</sup> and 0630 on the 25<sup>th</sup> of April as documented by Jason Parks, who was working on the property and checked on the tank at 10:30 pm on the 24th, and a neighbour who passed on the road on his way to work early on the morning of the 25th.)
    - (d.) The sediments and debris which this pure water picked up on its way down the channel would have settled rapidly, much, if not most of it before it reached the Eel River.

(1) California Geologic Service Geologist David Longstreth writes on page 2 of his report (see exhibit # 3 ) “A publically used road known as the M8 Road is located near the base of the slopes where the watercourse drains into the Eel River. What appears to be a 24 inch diameter metal culvert used as a watercourse crossing was *buried by sediment* at the inlet “. He goes on to write: “Very little sediment was observed deposited on the banks of the Eel River.”

He assumes that most of the sediment was delivered to the Eel River, but from the wide and deep sediment deposits shown in the photographs taken at the time of the inspection located behind the blocked culvert, and running for a good distance on the road between that culvert and the next one, it is clear that there are a great many yards of sediment that didn’t make it to the river. In fact, in some images one can see that the sediment had fallen out of suspension and only muddy water continued towards the second culvert and the thence to the Eel. Below the blocked culvert, the flow that continued across the road and over the side into the streambed below the M-8 road, it is clear that the rate of flow decreased, allowing for the settling of sand and mud on plants relatively close to the River. Again, it appears likely that much of the sediment settled before reaching the Eel. (see Images 2 & 5 from the previously referenced Complaint Inspection Report, April 30, 2014, and Images from the Water Board’s DVD).

His assumption is also challenged in Estelle Clifden’s’ Stream Restoration Report, (see Exhibit 2 ) in which she documents “...a small plug of sediment is located at the stream outlet, above the Eel River.” ( She goes on to say: “No remediation is recommended there because protecting the native vegetation in this location outweighs the potential improvement....” )

We suggest that the evidence favors a scenario in which most of the sediment settled in overbank flows, along the less steep reaches of the stream, behind blocked culverts, as sand covering the M-8 road and filling the deep roadside ditch leading to the next culvert, down on the stream banks on both sides of the blocked culvert and behind the rocks that blocked the road above the main culvert. All before it reached the Eel River.

Conclusion: The water reaching the River was insufficient to increase the TDML above the 20% limit, and would have cleared rapidly, limiting any possible impact on the listed Beneficial Uses to a few hours.

## **7. Closer Examination of Actual Impacts upon the 17 Beneficial Uses of the Eel River:**

The Complaint states that there was *Potential for Harm* to 17 Beneficial Uses of the Eel River, a Water of the United States. The 17 Beneficial Uses are listed and discussed below.

- a. Municipal and Domestic Supply: Water from the affected watercourse, or indeed that portion of the Upper Main Stem Eel River is not used in any municipal or domestic water supplies in the area.
- b. Agricultural Supply: The water in question is not used for agricultural purposes in the Eel River Canyon. The closest agricultural use is in the Potter Valley Irrigation District, miles away, and the spilled water with the sediments it carried would have been well diluted before the fraction of the Eel's water was diverted into the Russian River Drainage and thence into the Potter Valley Irrigation District's channels.
- i. would not have been used for any agricultural purpose, including frost protection, at that time of year.
  - ii. would not have contained any substance which might be considered harmful to agricultural uses.
- c. Industrial Service Supply: There is no Industry in the area using the water.
- d. Groundwater Recharge: Unlikely to be significant under the best of circumstances on such a slope.
- e. Freshwater Replenishment: This escape of up to 50,000 gallons would have added water to the Eel River, not subtracted from it.
- f. Navigation:
- i. This section of the Eel River is not navigable except by kayak or canoe. The event happened at night or in the early morning at a time when there would not have been anyone on the River.
  - ii. The amount of water reaching the Eel in this event would have been insignificant in comparison to the flow of the river.
  - iii. Any sediment which did reach the Eel would not have affected a kayak or canoe's navigation of the river.
- g. Hydropower Generation: Unaffected.
- h. Water Contact Recreation:
- i. Not applicable in April due to cold water temperatures.
  - ii. No fishing is allowed in the Eel River in the entire month of April, extending through the first week in May. (The event happened in April.) (See 2013-2014 *Freshwater Sport Fishing Regulations effective 3/3/2013 –3/28/2014, Exhibit 7*)
- i. Non-Contact Water Recreation: defined by the California Water Board as " picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities" ) is not applicable on this private property in the Eel River Canyon, and, given the time of year, would not have affected such recreation upstream or downstream of the event. (see definitions at: [http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/planningtmdls/basinplan/web/bp\\_ch2.shtml](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/bp_ch2.shtml), Exhibit 8)

j. Commercial and Sport Fishing:

- i. The Main Stem Eel is not a commercial fishery.
- ii. No Sport Fishing is allowed in the Eel River in April, in May. (See Exhibit 7)

k. Warm Freshwater Habitat: Not applicable in the Main Stem Eel River.

l. Cold Freshwater Habitat: Any effect would have been within the parameters of the TMDL.

m. Wildlife Habitat: unaffected in Eel River. Wildlife habitat, except that of macroinvertebrate insects in the affected watercourse is unlikely to have been affected. See Section V – Methodology, p.10, #7)

n. Rare Threatened or Endangered Species: Unaffected. None present in Affected Stream. (Ref: Non-Industrial Timber Harvest Plan: NTMP#1-00NTMP-019, Exhibit 9)

o. Migration of Aquatic Organisms: unlikely to have been present in the affected watercourse. (See Section V – Methodology, #7)

p. Spawning, Reproduction, and/or Early Development and Rearing:

- i. In his report Warden Crowl states the Affected Stream is a "non-fish bearing stream" (See: Exhibit 10: DFW Memo, Pg. 1 ) so the harm factor should be reduced.
- ii. The escape of this water was not in the spawning or reproductive season. An increase in fry heading downstream was documented by Fish & Wildlife (F&W), but as the TDML was not exceeded, this is by definition not an abnormal condition and can not be considered to have had any significant consequence.

q. Aquaculture: There Is No Aquaculture (defined as the farming, breeding, rearing, and harvesting of plants and animals in all types of water environments including ponds, rivers, lakes, and the ocean, including the production of fish and shellfish released into the wild to rebuild wild populations) in the Main Stem Eel River.

**In conclusion:**

It is clear that this accidental puncture and escape of up to 50,000 gallons of pure, native, unpolluted water did not violate the Water Quality Objectives identified in Basin Plan 3-300, and had no significant negative effects on any of the 17 Beneficial Uses of the Eel River.

This is not a Clean Water Act Issue. The sediment issue was caused by flow and volume, not because of pollutants. Sediment moved on the ground by water is not prohibited by federal law.

B. Harm to the Runoff Channel which is labelled in the Complaint Investigation Report "The Affected Stream":

The Complaint Inspection Report states the stream was: "obliterated." The allegations of "massive damage" are exaggerated since similar impacts occur from natural flash flood events.

1. We do not deny that the entirely accidental tank failure caused temporary harm to the Affected Stream. And for this harm we are truly sorry. But, the rupture which caused this harm was:
  - a. Entirely accidental
  - b. Unforseeable.
  - c. Immediately self- reported. Mr. Franklin, beneficiary of the Franklin Trust reported the incident to Fish & Wildlife as soon as he was informed of it, and did so with honest transparency.
  - d. Evaluation and Mitigation Assistance was sought. Mr. Franklin immediately sought assistance from Water Board and Fish and Wildlife experts in determining the best course of action to reduce and ameliorate the damage.
  - e. Mr. Franklin invited Mr. Feiler, Mr. Macedo and Mr. Longstreth to visit the property, view the damage and make recommendations for amelioration. He made them welcome, showed them everything they asked to see or that he thought might help them to advise him on ameliorating the damage and restoring the channel.
  - f. Ameliorated: Mr. Franklin followed the recommendations of the inspection team immediately.
  - g. Mr. Franklin sought Additional Expert Assistance.
    - i. In November of 2014 – when first we received a communication from the Water Board's Enforcement Team that they would be pursuing an ACL against us for severe damage to this runoff channel in an accidental incident, which we had already done our best to ameliorate, we consulted Estelle Clifden of North Coast Resource Management. Ms. Clifden visited the site, walked the Affected Stream, and viewed the damage. In her report she writes the "areas are naturally healing" and "will not benefit from human disturbance." Clifden recommended further remediation work at the culvert. (see photos and report in Exhibit #2) This was done immediately.

The Photo (below left) is of the culvert blocked by sediment at the M-8 Road. (Image 4255 of the Inspection Team's photos taken May 23<sup>rd</sup> 2013. See Water Board's Case in Chief DVD, Exhibit 8). The photo, below right, shows the same culvert repaired and, after 3 years, still perfectly serviceable.



- ii. Ms. Clifden revisited the Affected Stream in January of



2015. Her Stream Recovery Report is attached as Exhibit #11. In it she

states, and her photographs show, "Many sections of the watercourse are recovering from the water flow, revegetating both in and outside of the stream channel, such as the ferns observed in photo In other words, she documents that the Affected Stream had largely recovered from the damage done by the debris flow after only one winter.

2. Thus whatever damage to the Affected Stream could be undone was or was ameliorated as much as possible, as soon as possible in order to prevent any further harm and to further the natural restoration of what had been damaged.

3. Photographs taken in 2015 and 2016 show well developed vegetation (ferns, horsetails, etc.) in the stream banks and bed, and thick mosses covering large stones in the Affected Stream Channel. Clearly these slow-growing mosses, as well as the ferns, etc. survived the debris flow. (Exhibit #12)

We must conclude that damage to the Affected Stream was overstated in the Report. Furthermore, the methodology justifying the damage was flawed. We will show, below, in the section on Methodology, that:

1. The Amount of Water in the Bladder at the time of rupture was overestimated.

2. Given our more recent information, our original understanding of the dynamics of the escape of the water must be revised.

3. The force of the flow over the length of the escape, and therefore the amount of sediment calculated to have been removed from the Affected Stream were greatly overestimated and not relevant in this situation because the sediment was not contained in the water which escaped the tank. It was not "sediment laden discharge", but, instead, as you can see from these photos, pure water which flattened these grasses. It picked up sediment after discharge.



Compare these images with the photo (below) in which flattened grasses are heavily weighted down with sediment – collected as what had begun as pure water raced down the stream channel.





In this photo, image 5, of the Complaint Inspection Report, taken on May 3, 2013, the grasses on right of the Affected Stream are weighted down with sediment picked up as the escaped water flowed down channel from its source at the torn tank.

NB: The good news is that the vegetation quickly recovered. It was flattened, not uprooted, and was soon indistinguishable from that on the Left Bank.

4. Either the Distance and/or the Slope of the watercourse needs recalculation. In either case the method of calculation resulted in a significant overestimation of the harm done. (See below).

5. Harm to the plant and animal communities inhabiting the Affected Stream was overstated and inaccurate. In the Fish and Wildlife Report the classification of this Class III stream as a non-fish stream is documented. See Exhibit 10: DFW Memo p 1 para 2)

6. The CDFW report stated that there were "no areas that would notably benefit from habitat restoration work." (See DFW Memo p 3 Exhibit 10)

## **V. Methodology:**

### **A. Discharge Volume Estimate:**

The complaint states without any evidence for this assertion: "Even though the bladder contained water beyond its capacity, this Complaint conservatively estimates the discharge volume at 50,000 gallons."

In fact, none of us has any way of knowing how much water was actually in that water bladder at the time it failed. It may well have been less than 50,000 gallons. What we do know is that it was not more than 50,000 gallons, and certainly not the 80,000 gallons mentioned by all members of the Inspection Team in their Reports. (The Complaint Inspection Report, the memorandum of Mr. David Longstreth of the California Geological Service and included as Exhibit 2 in the Water Board's Case in Chief, and the report by Rick Macedo of DF&W). In his Memo Mr. David Longstreth attributes this figure to Rick Macedo of Fish and Wildlife. (Daniel Franklin denies speculation.)

1. The tank manufacturer states unequivocally that the tank holding that much liquid was "an impossibility". (See Letter from Simon Addicott, Vice President, GTA Tanks, Inc. Exhibit 5)
2. Specifications for the tank can be found in the Tank Manual (See exhibit 13, p. 0002 00-6). The Inspection thought that the tank might have stretched by as much as 10 feet.

3. The manufacturer states that a new tank might have been able to stretch a bit, but that this tank would not have been able to stretch by any measurable amount. (see exhibit# 5)
4. The person responsible for managing the filling of the tank states that the tank's height was not at the 4'9" maximum on the 24<sup>th</sup> when he went to bed that night at 10:30. (see Exhibit #6)
5. We know that the Affected Stream, from which the tank was filled, runs only for a few days after a rain. Precipitation Records from the Potter Valley Powerhouse got April, 2013 show no observable precipitation after April 8<sup>th</sup>. (See exhibit 14) The water bladder failed sometime in the night of April 24<sup>th</sup> -25<sup>th</sup>. There would have been no water entering the tank from the stream for 2 weeks preceding the tank failure.
6. We know from the photographs that the Vent Pipe was in place atop the tank and that the tank manufacturer confirms this. Therefore that before a burst any overfill of stored liquid would have emerged from the vent pipe, reducing the pressure in the tank and precluding a burst from overfilling. (see exhibits # 5, and #15 Tank Manual page 0004 00-2 )
7. The Inspection Report states that the overflow valve was closed allowing pressure to build up inside the tank. However, the Manual and the Tank Manufacturer both speak to this. The Tank Manual states " Vent pipe opens automatically when the tank vapor reaches 0.10 psi (pounds per square inch) (0.0068 atmospheres) to relieve pressure from inside the tank." ( See Exhibit 13, excerpts from Tank Manual, page 0002 00-2 ) In my conversations with Mr. Addicott, Vice President of GTA Tanks, Inc. he volunteered the same information.
8. We know that the tank did not display any signs of impending failure. As recommended, the tank had been examined regularly for signs of problems. There were no cracks in the fabric of the tank. There were no small leaks. There was no water emerging from the vent pipe. There was nothing that would have given rise to any concern.

Even today, 3 ½ years after the event, the fabric of the tank is smooth and flexible. There are no signs of cracking. This despite having spent the past 3½ years since its rupture exposed to all weathers: summer heat and sun, winter frosts and snow.

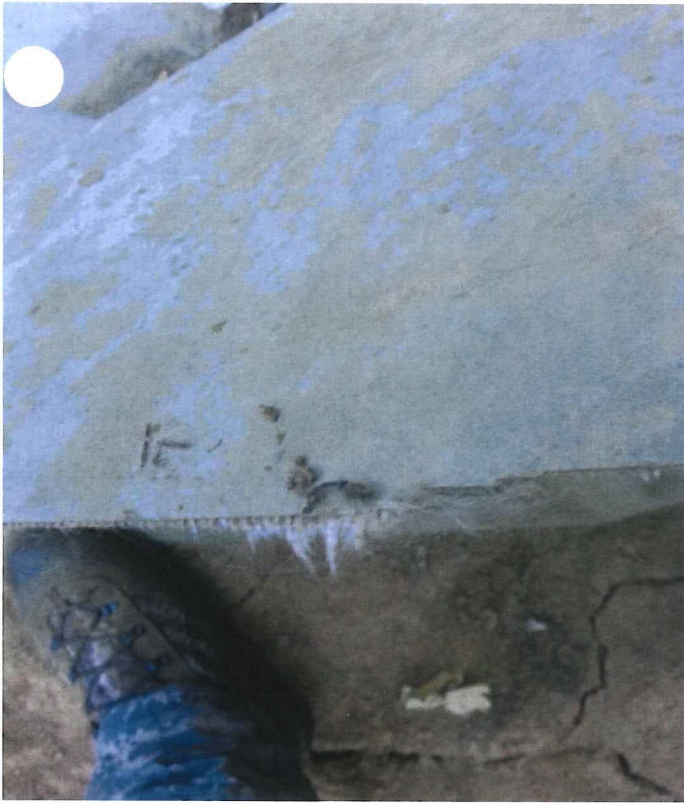
This photo of a sample of the fabric cut from the water bladder on November 17<sup>th</sup>, 2016 shows the fabric to be flexible and with no sign of deterioration. (N.B. one edge of that tank sample is badly frayed: this happened when the bladder burst and tore.)



Of course, this is not what the tank fabric looks like in-situ.

The following photo was taken Nov 17<sup>th</sup>, 2016, and focuses on the tear in the tank, and a possible site of the puncture

This photo was taken on-site. Note the fraying, the ragged edge, the damage at the edge, and the black marks which will not come off. This is likely to be the location of the original puncture.



## B. The Complaint

1. Cause for Failure: The Report would lead the reader to believe that the tank was likely to have failed because it was:

a. Designed For fuels and unsuitable for water, and was not suitable for long term storage. The label on the tank said as much.

But investigation of these tanks would reveal the following facts:

i. The tank was designed for holding fuels or other volatile liquids which would have a weakening effect on the tank itself over time.

ii. The tanks are not considered suitable for water because the tank matrix does NOT contain fungicides and algicides. Therefore any water held in the

tank would be likely to grow algae and perhaps fungi over time. (From the standpoint of the land, the absence of algicides and fungicides in water is not a disadvantage and, in fact, sounds like a real advantage for the environment.)

b. Past Its Recommended Lifespan. These tanks are designed for a storage life unused for 12 years, and a service life of 3 years (for fuels). The tank had no date on it, but, from its serial number the manufacturer was able to determine that it was manufactured for the Department of Defence in 1998. In about 2010 it would have been reaching the end of its storage life, and would have been disposed of, or, as this one was, sold into the 'Army Surplus' market. At that point it would have had at least 3 years of service life remaining. That would take the tank through 2013 in serviceable condition.

c. Improperly Installed:

There are no rules or permitting structure by the County or the State pertaining to the site preparation, installation, or maintenance of these tanks.

Daniel Franklin approached the Mendocino County Planning and Building Department when the tank was first purchased for assistance and to file any permits needed for the tank. He was told that they had no idea what he was talking about. They only had information on concrete tanks. And no permit was needed.

Daniel phoned the California Building Standards Commission to ask the same question. They had no information about flexible tanks either.

In November, 2015 Olive Franklin, Trustee, went to the Mendocino County Planning and Building Department in and was told that they had no information whatsoever about these tanks, and that no permit was required for one.

The tanks are sold on the roadside, often without any instructions or information at all, as this one was. They have a limited lifespan, but there was no date on this tank, and without the instruction manual (not available outside the military) one had no way of knowing that there was a limit to the tank's life.

Daniel Franklin was diligent in researching the installation, and installed the tank properly. He cleared the log deck, removed all stones roots and debris, put down a layer of sand, etc. In my initial conversation with Mr. Addicott, and unable to find one, I asked if he could recommend a commercial installer who could come out, view the site, and comment on the appropriateness and quality of the tank installation.

In his letter (see exhibit 5) Addicott writes: "It is important to note that there are no published installation instructions on how to size a berm, or how to install a tank, as this is taught at specialty "schools" in the military. In that regard it would not have been possible for you to have consulted with a commercial installer. We are impressed with your installation on level ground and the construction of a berm wall to mitigate any leaks. Based on the height you mentioned, it would appear that you operated it at the recommended maximum height consistent with the capacity of 50,000 gallons."

i. In the California Geological Survey Memorandum of August 14, 2013, the discussion of the siting of the bladder tank gives several wrong impressions. It states "*The bladder was placed on a graded pad located just above the watercourse.*" And "*Although little erosion of the pad area that contained the bladder was observed it was noted that fill materials appeared to be perched immediately above the watercourse.*" He then goes on to chide us for not having had a grading permit for this pad, or for having the pad properly engineered, and for "perching fill immediately above the watercourse". All these statements are ill-informed.

The graded pad was created 50 or 60 years ago as part of the original logging operation on this property, and has been used as a log deck several times since. As it has held up so well, under the pressure of stacks of logs, and even under the pressure of this tank failure, it is clear that it was properly engineered.

The "fill perched immediately above the watercourse" was, in fact, a berm on the logging deck, created and compacted in preparation for installation of the water bladder several years before, as a containment area – a prudent precaution against the possibility of a leak. A photo of the berm is included in the Complaint Inspection Report; the even height and smooth contours at the end which did not suffer from the initial pulse of water, show the care with which it was constructed in 2010.

As to its "perch immediately above the watercourse the presence of the inspection team in the photo provides scale, clearly showing that there is quite some distance between the berm and the trees, beyond which the land slopes down, over grassy vegetation (see Images 4515 & 4516 , p. into the streambed below. At that point the wide streambed begins. Image 4439 of the Water Boards Inspection photos. (See Water Board's Exhibit 9 DVD)



## 2. Dynamics of the Tank Failure:

The Complaint Inspection Report states: "I inspected the bladder and could see that it had burst along a seam, likely instantly releasing its entire contents into the adjacent Class II stream."

That one sentence merits clarification:

a. "it had burst along a seam": Photographs contained in the Report show this to have been a tear and not a split seam. Simon Addicott, Vice President of GTA Tanks, the tank manufacturer, brought this fact to our attention. A burst seam would have revealed smooth edges. The fabric - is visibly frayed along the tear. (See Photos of the torn fabric, pps 11 & 12)

Mr. Addicott states: "In reviewing the photographs you sent it would appear that the tank did not have a seam failure but was more likely punctured by a sharp object such as a tree limb to wild animal."

b. that it had burst "likely instantly releasing its entire contents": Again, we quote Mr. Addicott: "Once the reinforcing nylon fabric is damaged then an un-zipping of the tank can occur from end to end. Although there would be an initial rush of water that breached your berm, the velocity would decrease quickly as the tank height dropped and it may take 15-20mins for the tank to completely empty. The notion that 50,000 gallons of water rushed down the hillside would be completely false."

In explaining the characteristics of a flexible tank, Mr. Addicott stated that a flexible tank like this one would have, after the initial rush, collapsed upon itself, the remainder of its contents seeping. The amount remaining in the tank after the initial rush would have been at least 30% of the total and perhaps significantly more depending on the level of the tear and the pressure within the tank at the time. (see Exhibit# 5 Manufacturer's statement).

c. that the stream was a "Class II" stream. This is an ephemeral/episodic watercourse, classed as a Class III stream in the NTMP. It does not appear on any USGS map. (see NTMP exhibit # 9)

### 3. Volume of Sediment:

a. We take issue with the statement in the Complaint that: the tank contained "sediment-laden water". The tank contained pure water, free from any pollutants, including algicides or fungicides.

b. Any sediment was a result of the erosive effects of some portion of the stored water rapidly escaping the tank.

c. The amount of the sediment was exaggerated.

i. The sediment eroded from the hillside or shifted in the stream channel is a function of the amount of water, geology of the terrain, the slope of the channel, and the distance of the channel to the River.

ii. We can be sure the tank was not overfilled.

iii. Not all of the water would have escaped in a rush. The Tank Manufacturer estimates that somewhere between 30 and 50% of the water would have remained as the tank collapsed upon itself, to run out over time. Therefore, if the tank had been at full capacity, the amount of water in that first rush would have been somewhere between 25,000 and 35,000 gallons, or perhaps less than that – not the 50,000+ gallons alleged.

iv. Therefore the amount of erosive force would have been decreased by the lesser amount of water in that initial escape.

If the amount of water were the only factor governing the amount of erosion, one could assume that the number of cubic feet of sediments alleged to have been displaced by the water would have been reduced by 30% to 50%, and therefore the Potential for Harm decreased by that much. But this is not the only issue in the methodology.

### 4. Miscalculation of the Slope or the Length of the Channel or Both

a. Either the estimate of the slope of the hill or the length of the channel to the river, or both are incorrect.

In the Complaint Inspection Report we are given the precise GPS locations of the water bladder and the river – so we have a precise figure for the change in elevation from the river to the bladder, and we are told by Mr. Longstreth that the distance from the bladder to the river is 2000 ft.

If that were the case the average % of slope, conservatively figured, (and this is confirmed by the Geographic Information System) would be 27%. Not the 50 – 80% alleged in the report.

At this angle, less than half of the steepness of slope alleged in the Complaint Inspection Report, the erosive power of the flow would have been much decreased, resulting in a much reduced figure for the sediment shifted down the channel. If the steepness of slope correlated directly with the erosive power of the flow, the sediment shifted would have been decreased by 50%. The 513 cubic yards would then be 256.5 yds.

b. If, on the other hand, the figure of 50% – 80% for the slope were correct, the channel would have reached the elevation of the Eel River in a much shorter distance: approximately 1200 ft. vs the 2000 in the report. In this case, as the number of cubic yards of sediments alleged to have been washed from the channel (being a multiple of the number of linear feet of the channel), the erosive damage to the channel would have been only 60% of the figure given in the report. 60% would change the figure from of 513 to 308 cu. yds. And, because the sediment would have had to travel the additional 800 feet before reaching the river, even more of it would have fallen out of suspension in the flow and settled before reaching the river.

Whichever measurement was used to determine the amount of sediment displaced, the Level of Harm and the penalty it was used to justify should be reduced if not lifted.

c. That the erosive effect of the flush of water leaving the tank would have been modified by the amount of water released in the initial flush and the length/slope of the channel is demonstrated by the photographs in the Complaint Inspection Report (See Exhibit # 1) and the additional photographs taken in July of 2015 and included in the Water Board's Case in Chief (see Water Board's Exhibit 8)

i. Image 10 of the skid trail on page 12 of the Report makes it clear that the boulders in the photograph were not moved by the debris flow at all. If they had been caught in the debris flow the grasses and other plants growing beside and between them would surely have been demolished. Instead, they are shown green, healthy and unmuddied in the sunshine. The flat on which they sit is clearly untouched by the flow. (These boulders had in fact been bulldozed into that location years ago – left to provide a barrier at the end of the skid trail, called a logging road in the inspection report.)

ii. Image 2, on page 7 of the Report allows one to contrast these boulders with those in of the report (page 7), which had sat, unmoved by the flow on the side of the road. You can clearly see that they had been in the path of the flow; they are covered by the mud. And, by all appearances, they seem to have formed a barrier or dam against the sediments in the flow: smaller stones, pebbles, and debris can be seen to have come to rest behind them. Note that the bushes, standing 3 to 4 ft. high alongside these boulders were not broken or damaged, and, looking up the watercourse, the streamside vegetation shows no sign of being damaged in a major flow.

(Also compare the size of the "boulders" on the M-8 road to the size of the vegetation, to the truck in the background and to the tire tracks visible in the mud on the road surface in Image 1 of the Complaint Inspection Report. They are much smaller than those in image 10. They are rocks.)

This photo (Image 2) reveals a clearer version of the event on the M-8 road. As the debris-flow descended the Affected Stream channel and reached an area of decreased slope, it blocked the

culvert at the road, reducing the sediments and water going into the Eel significantly. Some of the flow overtopped the road, but the dam of rocks and stones which built up behind the pre-existing 'boulders' trapped much of this. The remaining debris and sediments, blocked from the culvert, were carried in the flow along the inside of the road, settling as it travelled to the next culvert. By the time it reached that culvert most of the sediments displaced had settled, leaving a much reduced impact on the Eel River than would otherwise have been the case.

iii. In Image 5, page 9 of the Report showing the channel below the blocked culvert leading to the Eel, one can see that the water did overflow the bank. The grasses are weighted down with fine sediment. But they were not uprooted, as they would have been if the flow had been contained coarse materials and heavy debris. One can see that the sediment was rapidly settling on the blades of grass as it flowed. Also note the absence of visible mud splash into the bushes alongside the banks, demonstrating clearly that even after its fall from the culvert or the road above, the flow was not as forceful as one was led to believe. It appears to have been ameliorated, as mentioned above by the blockage of the culvert, greatly reducing the force of the flow and the materials it carried.

It is impossible to estimate with any accuracy the actual amount of sediment which was displaced from the channel, and which did not reach the River, but given that we now know that neither the force of the flow nor the slope or distance it travelled were anywhere near the estimates made in the Report we know that it must have been much less than the estimate found in the Report.

Additionally, much of the sediment which settled along the road and in the channel leading to the next culvert was cleared before the inspection, and more still afterwards.

#### 5. Scour, Downcutting, and Level of Flow:

More photographs taken on the day would be useful. Sadly, Dan Franklin did not take photos. He walked the property with the Inspection team as they were taking photos, but never thought they would be used against him. He assumed the Enforcement Team, as Environmental Scientists, would photograph all aspects of the stream.

a. The photos taken by the Enforcement Team and included in the report show the very worst of the damage. In their photos the damage pictured, whether scour, or level of flow represent the worst examples. In many areas the damage was not nearly so bad. (See Stream Restoration Report Exhibit#4)

b. In the aforementioned report, Estelle Clifden writes: "The stream banks appear to have been steeply incised before the April 2013 water spill incident. Channel down cutting or side channel scour varied by location. Considering there is no baseline measurements for the affected watercourse, it is difficult to quantify the channel scour in sections. Sections of existing bedrock are common in streambeds of tributaries to the Eel."

Further, her report states: "The NCRWCB Report claims the pulse flow removed 'most of the instream gravel and cobbles' (14) which is not consistent with photos taken by NCRM, as seen in the diversity of substrate in photos 5 & 6.

As we know from the Stream Restoration report that the damage done by the flow was not as extensive as reported by the inspection team, and that the supposedly 'obliterated' stream

recovered from that less extensive damage rapidly, it is clear that the damage done ultimately was not as significant as the enforcement team expected.

c. Photos taken by the Water Board in 2013 and 2015, and newly made available to us, are helpful in documenting this. See Water Board's Case in Chief, Exhibits 8, 9 and 11)

6. Harm to the plant and animal communities resident in the Affected Stream.

Challenging the Allegations of Harm was made difficult by not having records of the condition of the Affected Stream and its residents before the tank failed. What we do know for certain is:

a. The Water Board's conclusions about the damage were often speculative, and were based on comparison with the attributes of the stream they used as a 'Reference Stream'. The problem is that the 'Reference Stream' is in no way equivalent to the 'Affected Stream'

**Use of the 'Reference Stream' As A Basis For Comparison With The Affected Stream' Leads To Incorrect Conclusions**

Attributes of the "Reference Stream" vs the "Affected Stream":

The Reference Stream is fed by 4 springs and several pools may even contain water all year round. The Affected Stream has no springs, and no pools containing water except directly after rain events.

The Reference Stream's plant life is, in one place, quite lush and the stream pools are capable of supporting macroinvertebrates and perhaps even amphibians. This most lush section of the Reference Stream is the only photograph of the Reference Stream included in the Water Board's Report, despite the fact that this lushness is not representative of much of the rest of the Reference Stream, and where the contrast the Affected Stream is not so great. (See Water Board's Case in Chief, Exhibits 8, 9 and 11)

In the January 2015 Stream Recovery Report of Estelle Clifden, Registered Professional Forester (RPF) at North Coast Resource Management (NRCM) on the restoration of the Affected Stream (included as Exhibit # 11) she documents in text and photographs the recovery of the Affected Stream after one Winter. 'Obliteration' seems a misnomer.

In the above-mentioned Report she compares the Reference Stream with the Affected Stream and makes the following points:

- "NCRM did not find the adjacent stream to be a comparable drainage of 'similar size'. " (Complaint and Inspection Report: 4/30/2014 NCRWQCB, p6).
- "The impacted watercourse has a watershed of approximately 33 acres, while the adjacent unimpacted stream has an area of 117 acres, making it (the Reference Stream) over 3 times larger than the Affected Stream."
- "The Class II reference stream is also fed by multiple perennial springs that impact its seasonal hydrology." As mentioned before, the Affected Stream is fed by no springs.
- The Class III watercourse is an ephemeral drainage as mapped on the Unit 3 NTMP (1-00NTMP-019 MEN/LAK) maps at the ownership.

Further, the Reference Stream is classified as a Class II Stream, whereas the Affected Stream is a Class III ephemeral stream. Fortunately we have several sources of information on this:

- a. Geologic Survey Maps showing only one intermittent Blue Line Stream on the property.
- b. Mendocino County Maps showing the same.
- c. The latest online USGS Stream-Stat maps which, at the highest level of magnification do not show the existence of this watercourse at all.
- d. The Non-Industrial Timber Management Plan (NTMP): Done in the year 2000, this reference is cited in the Water Board's Case in Chief.

Mr. Jeff Longcrier, a Registered Professional Forester (RPF) (not to be confused with Mr. David Longstreth) prepared the cited 2000 Non-Industrial Timber Management Plan (NTMP). In it he states he walked and classed each watercourse on the property, looking for springs and documenting each spring on his map of the property. Longcrier found the Reference Stream to be the only Class II stream on the property. He calls the Affected Stream an ephemeral Class III watercourse. Beyond that, he found no spring in the Affected Stream. In the absence of any water source besides rain events this would mean the channel would be empty of water very shortly after a rain.

In fact this is clearly demonstrated in the photographic record.

- i. See photographs of the Affected Stream Channel in the Complaint Investigation Report: images 3,4,5,7,10,12,13. (See Water Board Exhibit 1.C)
- ii. Photographs included In the Stream Restoration Report November 2014, and
- iii. Stream Recovery Report 2015 (Exhibits #2 & #11)
- iv. Photographs in Water Board's Case in Chief (See W.B. Exhibits 8, 9 and 11)
- v. Additional photographs taken during and shortly after rain events in 2015 and 2016 (See Exhibit 12)
- vi. Daily Precipitation Records for the month of April 2013 taken at PG&E's Potter Valley Powerhouse (see Exhibit 14)

#### Harm to Macroinvertebrates and Plant life populating the Affected Stream

The Complaint Inspection Report states that macroinvertebrate and plant life was "obliterated" by the accident. This claim requires more careful consideration. There is, in fact, some question regarding the extent of the macroinvertebrate life in the Affected Stream at the time of the accident. Jeff Longcrier, on page 60 of his carefully prepared Non-Industrial Timber Management Plan writes: " All watercourses on the NTMP area were walked and classed during preparation of the plan. During these visits, suitable habitats for the species listed above (reptiles and amphibians) were checked for the presence of individuals. No species were located during these searches."

In his report (NTMP) he did not mention macroinvertebrates, but in a telephone conversation with Olive Franklin in October of 2016, Mr. Longcrier stated that when he walked the watercourses on the property gathering information for the NTMP he looked for rare amphibians in the stream habitats which are home to macroinvertebrates. As macroinvertebrates can be prey of the rare and endangered amphibians (Red-legged and yellow-legged frogs and the southern torrent salamander), he looked for those as indicator species, and found none. In this telephone conversation Mr. Longcrier reminded me that this NTMP was done in the year 2000, well before the long drought which has so affected the county's woodlands.

NB: Mr. Longcrier also writes (see NTMP p65) as regards Sensitive Plant Species: "No threatened or endangered species of plants are known to exist on the NTMP area. "

Estelle Clifden's previously cited Stream Recovery Report states that when she observed the streambed on January 2, 2015 "...the stream has stabilized. No fresh side channel erosion or sloughing was observed. This is notable given the early December 2014 storm that brought flooding to the region. *Water in the stream flows clear and the stream bed contains a diversity of substrate, providing potential sheltering structures for aquatic organisms.* Many sections of the watercourse are recovering from the water flow, revegetating both in and outside of the stream channel, such as the ferns observed in photo 3." (See Exhibit 11)

Backing up Mr. Longcrier's findings, the literature on the subject of macroinvertebrates finds that macroinvertebrate populations do not thrive and may not survive at all in dry- channel ecosystems suffering from low flow and/or drought conditions. (See Footnotes A, B, and C below.)

On the basis of the literature cited below and the Stream Recovery Report of North Coast Resource Management, we are heartened to think that any macroinvertebrates that had been living in the Subject Stream would have been quickly repopulated from the Reference Stream. Our own recent, Nov. 20, 2016 visit to the Affected Stream clearly revealed regeneration of fern and abundant plant life in the stream channel. (See Photographs in Water Board's Case in Chief Exhibits 8, 9 and 11)

The Affected Stream is a "non-fish bearing stream" so the harm factor should be reduced; the importance of macroinvertebrates in the streams seems to be most strongly related to the fish population.

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FOOTNOTES:

┐

a. Avital Gasith and Vincent Resh in their study of Benthic Organisms in similar dry channel ecosystems in Northern California found that low flows can cause a decline in habitat diversity, water quality, and food resources. "As the dry season progresses, habitat conditions become harsher; environmental pressures may again become the more important regulators of stream populations and community structure." See: "Streams In Mediterranean Climate Regions: Abiotic Influences And Biotic Responses To Predictable Seasonal Events", published in the Annual Review of Ecology and Systematics (1999): 31:51-58.

b. Rachel Stubbington, in her article "Changes in Invertebrate Assemblage Composition In Benthic And Hyporheic Zones During A Severe Supraseasonal Drought", documented her findings that drought can result in reductions in macroinvertebrate species and taxon richness. Journal of Freshwater Science, March 15, 2015, Vol.34 (1), pp. 344- 354).

*(note: As the Affected Stream suffers from drought conditions for most of the year, it is likely that the macroinvertebrate population has never thrived, or even perhaps, survived there.)*

c. Amber Clarke, Ralph Mac Nally, Nick Bond, and P.S. Lake, "The Effect Of Flow Permanence On Aquatic Macroinvertebrate Diversity And Community Structure In Three Headwater Streams In A Forest Catchment", Canadian Journal of Fisheries and Aquatic Sciences, September 24, 2010. The article documents the rapid restoration of macroinvertebrate populations and diversity in ephemeral streams in a forested environment. The authors go on to say, "Taxa from the perennial stream were extremely efficient at colonizing seasonally dry nearby streams. Differences in assemblage structure between these temporary and permanent headwater streams may only arise seasonally and also appear related to flow permanence."

---

#### **IV Calculation of Penalties**

**If the Water Board chooses to proceed with this ACL** despite these legal flaws, we ask that you reconsider the harm and culpability factors which are driving the very high penalties. In light of the information from the Tank Manufacturer, please consider whether there was negligence or culpability on our part with regard to installing and managing the tank. In light of the dramatic restoration which has occurred naturally, we ask you to consider what lasting harm was done. Please consider whether it is right to fine us at all for what was an unforeseen and unforeseeable accident.

There are further considerations worthy of your attention:

##### **Economic Benefit:**

There were no Economic Benefits.

The Economic Benefit figures in the Water Board's case in chief are inaccurate and without foundation.

- The water bladder's primary purpose was always to have water stored for fire suppression in case of wildfire in the Eel River Canyon, in order to protect the timber assets, still many years away from harvest from loss. (See Exhibit # 9) Non- Industrial Timber Management Plan: NTMP#1-00NTMP-019 cited in the Water Board's Case in Chief. On page 53 of this NTMP Mr. Jeff Longcrier (RPF) discusses Hazard Reduction. He writes: "Fire has been a major factor affecting the condition of the forests throughout the area. The most recent major fire was in 1987, when the "Lauder" fire burned approximately 1650 acres of the watershed and biological assessment areas. Today reducing fire hazard is one of our major concerns in promoting long term management of mixed-conifer and Douglas-fir forests. In effect, young Douglas-fir, which has a thin bark and is killed by fire, and brush species have arisen as a result of fire exclusion. These trees grow in brushy flammable stands associated with ladder-fuels; and so fire protection planning is of paramount importance." He goes on to recommend the development of Emergency Water Supplies. This was enough of a warning for us, especially in light of the 2009 lightning fires all over the North State. We were being prudent in installing the water bladder tank specifically for fire protection.
- Mr. Addicott of GTA Tanks (see Exhibit 5) writes: "We commend your effort to provide water for fire-fighting purposes in a remote area and in light of the recent wild-fires and drought conditions, we would have thought that the California Department of Forestry and Fire Protection and the Water Board would be very sympathetic to the financial distress that this effort has caused your family."

- Two smaller tanks were used for normal domestic uses as well as for crop irrigation; overflow from them was used to fill the water bladder.
- As I've found in my research, any tank can rupture. (See Exhibit 16) Use of the cost of a tank of any variety, particularly one purchased and installed in order to fight wildfire, in determining Economic Benefit is not proper.
- There is no evidence that any crops were sold; in fact, they were not sold. None of the sales or value information is relevant. Beyond that, the figures about crop size and value are based on speculation and best case scenarios. On Pg. 9 - info sheet says it contains "best guess" - this is not reliable enough for use as evidence and should be excluded. The "ability to pay" analysis is also not relevant. All infrastructure and garden development costs were provided by members of the collective; the agreement was that the cooperative members would cover expenses and Daniel would provide the land.
- The 'crop' was grown by a collective for medical purposes and the inputs, work and harvest were shared between the members of the collective. The financial figures, bank statements and tax returns over the past four years document the fact that there was no profit. The certification mentions "black market" crop. There was no marketing of this crop. It is clear from the attachments that they care more about and have spent more effort on the crop than on the water issues.

We request exclusion of all information about cannabis as it is irrelevant to the water discharge issue. The water bladder had no connection with the crop grown; it was purchased for emergency water storage for fire protection. The accident happened in April, which clearly isolates it from any cannabis cultivation. April is still well outside the growing season. No crop was growing on the property when the water bladder failed. The issue of the crop was only included as part of Ability to Pay.

We also request exclusion of the 2015 flyover report and photos as this is irrelevant to the focus of the complaint, the 2013 tank failure.

The focus on instead on cannabis and all the speculation about amount product and values turns the case into something like a witch hunt, all this due to the existence of what would, in California, be considered a small crop of plants, grown without any chemicals and that are now fully legalized in California.

A glance at the Prosecution Team's Exhibit List shows the misplacement of priorities that Almost half of the items to be presented relate directly to cannabis and the pricing or crop value of cannabis.

### **Inability to Pay:**

The Trust and Daniel Franklin have provided information including tax records and bank statements these clearly demonstrate that there is no ability to pay the proposed fine.

Daniel has been essentially homeless for the past several years, sleeping at friends' houses, etc. He has been unable to work due to injuries suffered in a quad accident on the property several years ago. An attempt to work at Safeway in 2015 lasted only a few weeks due to the nerve damage to his neck and arms making the lifting necessary in his work impossible. He suffers from significant pain.

Daniel now lives in an apartment in Ukiah. The rent and basic living expenses have been paid by his mother, and more recently, supplemented with monies from Mendocino County which he receives as foster parent to the daughter of a former girlfriend who considers him her dad. It is still a hand-to-mouth existence.

At age 70, a retired nurse, I can no longer afford to do supplement his finances.

We put all the money we could into the restoration efforts. More would have been done if we had had the financial means. Fortunately the natural recovery of the stream is proceeding well

#### **Assets of the Trust:**

The Trust owns the 17777 Eel River Road property – The appraisal of this property, done in 2015 (see exhibit # 19) shows that the land really only has value as a "campsite" and will be difficult to sell. Because this is not a liquid asset, the Water Board should not be using property as the ability to pay. Does the state expect that the Trust will deed the property over to the state and take all available assets from the trust for an accidental discharge?

The Trust's only other asset is a rental house in Willits. The house is mortgaged, and since the crash in 2008 has been underwater. Property values are increasing slowly but current value does not begin to approximate pre-crash value. The Trust is currently in the process of evicting the current tenant due to non-payment of rent and damage to the house. The Trust has not been able to afford to repair the damage.

#### **Proposed Penalty Inconsistent with Others**

The California State Water Quality Control Boards have a commitment to FAIR, FIRM, AND CONSISTENT ENFORCEMENT. Although we recognize that each case is different, penalties for other, much more damaging and often intentional events both in Region I and in other California Regions have been given fines which are much less than the fine proposed for us. See examples below:

Case Ref. #	Region	# Events	Details	Penalty
R1-2013-0045	1. Comptche, Mendocino	62	Excavation of stream bed to form a reservoir causing severe damage to the stream.	\$30,000.
R1-2014-0020	1. Willits Mendocino	4	Erosion of large amounts of soil from improperly bulldozed fields into a stream over a long period of time.	\$56,404.
R1-2014-0058	1. Ukiah Mendocino	17	17 exceedances of the effluent limitations for Copper, Cyanide, Dichlorobromomethane and Toxicity as set forth in Orders No. R1-2006-0049 and No. R1-2012-0068.	\$51,000 (proposed )
R1-2014-0005	1. Trinity County	21 days	Staff observed surfacing sewage from the Park flowing between two properties towards the roadside ditch, which flows to the nearby intermittent stream and thence to the Trinity River. Staff observed an unfenced unlined effluent pond containing undisinfected effluent from the Park. This pond is unlined and was built by constructing an earthfill embankment across an intermittent stream. The pumps and piping associated with the septic tank were also leaking.	\$50,000
R5-2014-0536	5. Kern County	1/1/2012 11/15/2013	Discharge by of 517 barrels (21, 714 gallons) of Oilfield Fluids into unlined pits, threatening groundwater supplies. (\$6/gallon)	\$130,284
R5-2007-0518	5. Amador County	7/26/09 1/24/07	50,750 gallons of raw sewage water discharged into Mule Creek on 7 separate occasions over a 7 month period.	\$50,000

In addition to the table above, further perspective is provided by the fact that between 2012 and 2014, Region 1 took action leading to penalties only 3 times. The assessed liability for all three taken together was **\$120,901**.

Our proposed fine is **\$381,949**. This fine is highly inequitable.

### **In Conclusion**

We ask that you consider that there is no justification for the Water Board to proceed with this case

- It is not a Water of the United States so is not under Water Board Jurisdiction
- It does not involve a point-source flow, but was a sheet flow.
- It involved no pollutants in the water when it escaped.
- The damage was not intentional
- There was no negligence
- We self-reported immediately
- We took immediate remedial action.
- There was no significant or lasting harm to the Environment.
- The proposed penalty is punitive, especially given our circumstances, and dramatically inconsistent with penalties assessed elsewhere in Region 1 and Statewide, often for more grievous, intentional, repetitive actions.





November 25, 2014

Daniel Franklin  
27860 Poppy Drive  
Willits, CA 95490

Re: Restoration Work at 17777 Eel River Road, Potter Valley, Mendocino County, California.

Dear Mr. Franklin,

I recommend further remediation based on my review of the damages that occurred at your property above the Eel River, Potter Valley, California. Specifically, additional fill should be excavated and stabilized at the culvert crossing of Road M8. No other remediation is recommended at other locations above or below this crossing where the majority of damages to the stream channel occurred. These other areas are naturally healing and I believe will not benefit from human disturbance. Although a small plug of sediment is located at the stream outlet, above the Eel River, no remediation is recommended there because, protecting the native vegetation in this location outweighs the potential improvement that could occur by creating a tractor road to exposing and excavate soil in this sensitive location.

The majority of the soil deposited at the M8 culvert was excavation after the discharging event, but some soil was left perched above and adjacent to the stream channel. Additional excavation is recommended as follows:

- East of the culvert inlet, fill shall be sloped back and excavated as needed (approximately 10 cubic yards of fill).
- West of the culvert inlet, fill shall be excavated down to the original hill slope (approximately 5 cubic yards).
- Above the culvert inlet, the berm shall be removed (approximately 3 cubic yards).

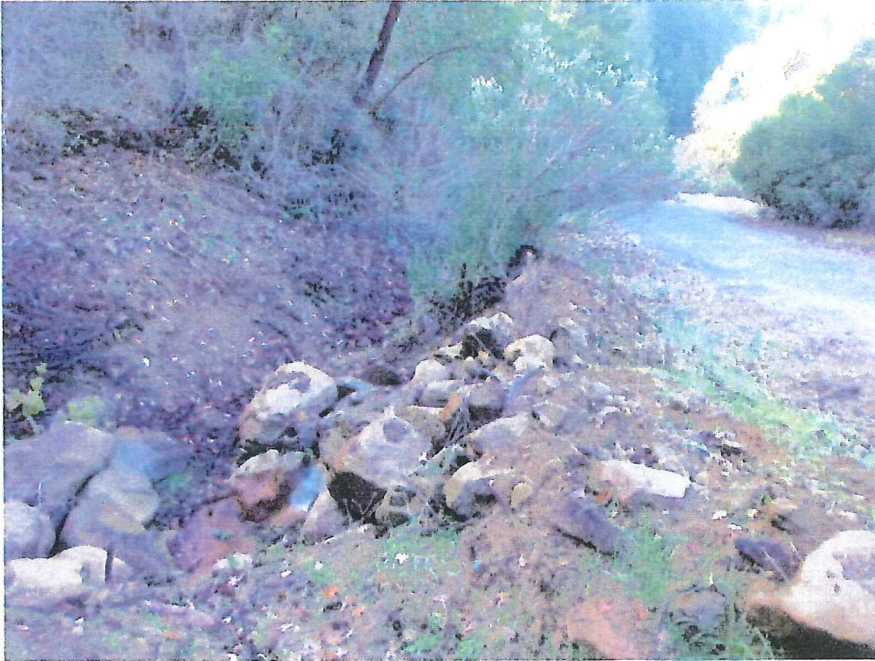
All excavated fill shall be deposited a minimum of 30-feet from the stream. Deposited fill shall be compacted and stabilized with straw mulch.

Please let me know if you have any questions regarding these recommendations.

Sincerely,,

A handwritten signature in blue ink that reads "Estelle P. Clifton".

Estelle P. Clifton, RPF #2858  
(707) 485-7211 ex. 220

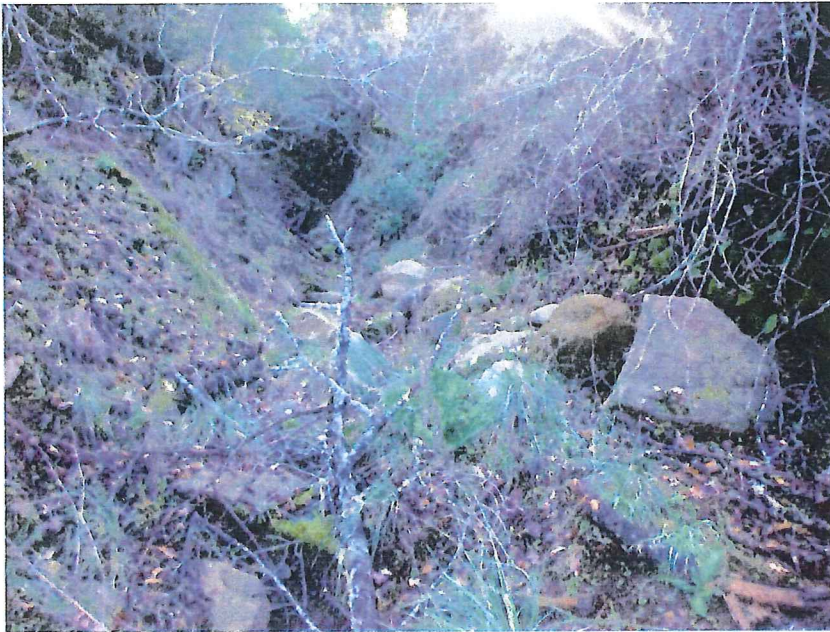


Soil berm above the culvert inlet and fill on the bank west of channel.

Fill located east of the culvert inlet.



P.O. Box 435 Calpella CA 95418  
voice 707.485.7211 [www.ncrm.com](http://www.ncrm.com) 707.485.8962 fax



Stream channel above the culvert where re-vegetation has occurred.

Small sediment plug, located above the Eel River







# DEPARTMENT OF CONSERVATION

## CALIFORNIA GEOLOGICAL SURVEY

801 K STREET • MS 13-40 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 327-0791 • FAX 916 / 323-9264 • TDD 916 / 324-2555 • WEB SITE [conservation.ca.gov](http://conservation.ca.gov)

### Memorandum

To: Mr. Stormer Feiler  
North Coast Regional Water Quality Board  
5550 Skylane Boulevard, Suite A  
Santa Rosa, CA 95403

From: David Longstreth  
Department of Conservation  
California Geological Survey  
135 Ridgway Avenue  
Santa Rosa, CA 95401

Date: August 14, 2013

Subject: Preliminary Engineering Geologic Assessment of Water Storage Bladder Failure and Erosion, Portion of Section 34, T18N, R11W, MD BL&M; Potter Valley Area, CA.

### References:

California Department of Fish and Wildlife (CDFW), 2013, Incident Involving Failure of a Water Storage Bladder Affecting an Unnamed Class II Stream and the Eel River below Lake Pillsbury on the Franklin Property, unpublished memo to Warden Steven Crowl, California Department of Fish and Wildlife, Prepared by Rick Macedo, dated May 30.

California Geological Survey (CGS), 1994, Engineering Geologic Review of Timber Harvesting Plan 1-94-375 MEN, unpublished memo to Lloyd Keefer, Chief, Region I, California Department of Forestry and Fire Protection, P.O. Box 670, Santa Rosa, CA 95402, prepared by Julie Bawcom, dated August 29.

Durham, J., 1979, Potter Valley 15' Quadrangle: California Department of Forestry, Title II Geologic Data Compilation Project, Unpublished, scale 1:62,500.

### Introduction:

The California Geological Survey (CGS) was requested by the North Coast Regional Water Quality Board (NCRWQB) to evaluate reported erosion within a Class II tributary to the Eel River portion in the Potter Valley area. The site is located on steep (80± percent) northwest facing slopes that drain to the main stem Eel River. A site visit was conducted on May 24, 2013 by Rick Macedo (CDFW), Steven Crowl (CDFW), Stormer Feiler (NCRWQCB), Dave Longstreth (CGS), and Daniel Franklin (landowner). The erosion site is located within a portion of Unit 3 of 1-00NTMP-019 MEN/LAK. Review of records indicates that geologic field review of the NTMP was not conducted.

Geologic Conditions:

The site area is located approximately 4 miles northeast of Potter Valley, Mendocino County, California. The slopes are underlain by Cretaceous age sedimentary bedrock of the Upper Great Valley Sequence (Durham, 1979, Figure 1) described as interbedded sandstone, siltstone and mudstone. CGS (1994, Figure 2) performed a pre-harvest inspection of THP 1-94-375 MEN describing site rocks as highly sheared and deeply weathered sandstone and gray mudstone. Site observations during this inspection concur with the bedrock descriptions.

Observations: (keyed to Figure 3)

Map Point 1 - Water Bladder Failure. Reportedly a 50,000 gallon water bladder (measured to be 70 feet long and 25 feet wide) used for irrigation purposes catastrophically failed during the night of April 24/25, 2013 and released water into a Class II tributary of the Eel River. The bladder was placed on a graded pad located just above the watercourse. According to the landowner the gravity fed water supply to the bladder was left open during a storm event filling the bladder to beyond its capacity and to a point where it burst along a seam. Apparently all the water from the bladder was released and concentrated into the Class II watercourse at one time. CDFW (2013) estimates that approximately 80,000 gallons of water was released. Although little erosion of the pad area that contained the bladder was observed it was noted that fill materials appeared to be perched immediately above the watercourse.

Map Point 2 - Channel Bank Erosion and Scour. Based on observations during our site visit it appears that approximately 2000 feet of a Class II watercourse channel was eroded and scoured as a result of the water release. The eroded watercourse consists of a "V" shaped watercourse on 50 to 80 percent slopes. It appears that the concentrated release of water eroded and scoured the watercourse channel bottom and transported material down slope to the Eel River. The volume of eroded material may have increased (bulked) as it flowed downslope, ultimately forming a small debris flow. Scour of channel banks was observed to range from 2 to 5 feet in depth and 2 to 6 feet in width. Boulders on the order of 2 to 4 feet in diameter appeared to be involved in the debris flow. Very little sediment was observed deposited on the banks of the Eel River. It appears that most of the sediment generated during the water release and subsequent debris flow were delivered to the Eel River. Using an average V shaped scour channel of 3.5 feet of depth and 4 feet of width it is estimated that on the order of 500 cubic yards of sediment and debris was delivered to the Eel River as a result of the water bladder failure.

$$((3.5 \text{ feet} \times 4 \text{ feet}) \div 2) \times 2000 \text{ feet} = 14,000 \text{ cubic feet}$$

$$14,000 \text{ cubic feet} \div 27 \text{ cubic feet/cubic yard} = 518 \text{ cubic yards}$$

Map Point 3 - Logging Road Watercourse Crossing. The outside edge of a logging road located approximately 700 feet downstream of the failed water bladder was eroded by material that overtopped the road. A gully on the order of 12 feet wide, 15 feet long and 2 to 5 feet deep was observed in the outside edge of the road. An 8 inch diameter metal culvert was observed to be washed about 10 feet downstream of the watercourse crossing and wrapped around a tree. Because additional fill material was observed to remain in the crossing it appears that additional erosion and sediment delivery can occur at this location.

Map Point 4 - M8 Road Watercourse Crossing. A publically used road known as the M8 Road is located near the base of the slopes where the watercourse drains into the Eel River. What appears to be a 24 inch diameter metal culvert used as a watercourse crossing was buried by sediment at the inlet. While much of the debris had been removed prior to our site visit it appears that debris was deposited on the roadway by an apparent debris flow. The outside fill face appeared eroded with rills and gullies on the order of 1 to 2 feet deep. Because the culvert inlet is plugged it appears likely that seasonal flow within the watercourse will be diverted down the M8 road increasing the potential for future sediment delivery.

Existing Road System Unrelated to the Bladder Failure. The existing road system within the site area appeared to contain areas of gullying and erosion not related to the water bladder failure. It appears likely that some of the erosion is resulting in sediment delivery to site watercourses. Evaluation of the road system was not the primary goal of our site visit and volumes of sediment delivery from the existing road system was not estimated during our site visit.

Recommendations:

1). Erosion Control Plan. An erosion control plan should be developed by California licensed Professional Geologist or California licensed Civil Engineer for the site area. Among other things the plan should include evaluation and mitigation of:

- Map Point 1. Perched fills in the pad area where the water bladder is located.
- Map Point 3. The watercourse crossing on the logging road located approximately 700 feet downstream of the water bladder.
- Map Point 4. The watercourse crossing on the M8 Road.
- The erosion control plan should evaluate the existing road system and infrastructure with regard to the potential for sediment delivery. The erosion control plan should include mitigations developed to minimize the potential for road generated erosion and sediment delivery.

**It is critical that such a plan be implemented before this winter's rains.**

2). Any water storage system (existing or proposed) at the site should be evaluated, mitigated and/or designed by a California licensed Civil Engineer. Water storage systems should be designed in such a way as to have either/or emergency automatic shut off valves and non-erosive overflow spillways incorporated into the system so that water can be released during storm events without eroding stream channels. Graded pad areas that support such facilities should be properly designed by a California licensed Civil Engineer to support the load of the water storage system (for example a 50,000 gallon water bladder would weigh: 50,000 gallons x 8.33 pounds/gallon = 416,500 pounds) such that the potential for settlement and/or failure of the pad area is minimized, thus minimizing potential adverse effects to the water storage system.

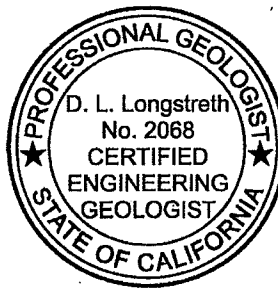
3). A copy of this memo and all associated documentation shall be provided to the Mendocino County Department of Building and Planning.

Public Safety Issues and Comments to County of Mendocino:

Because the M8 Road is a publically used road issues regarding impacts to public safety are discussed in this memo. It is not clear if the County of Mendocino would be the permitting agency for road repair on the M8 road. We recommend that the county be informed of such repairs. The county may require evaluation by a California Engineering Geologist (CEG) and/or a Civil Engineer.

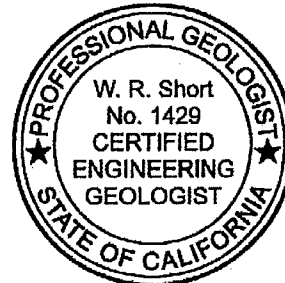
Disclosure: This memo should in no way be considered an Engineering Geologic Report and should not be substituted in any way for such evaluations and reports recommended and requested in this memo.

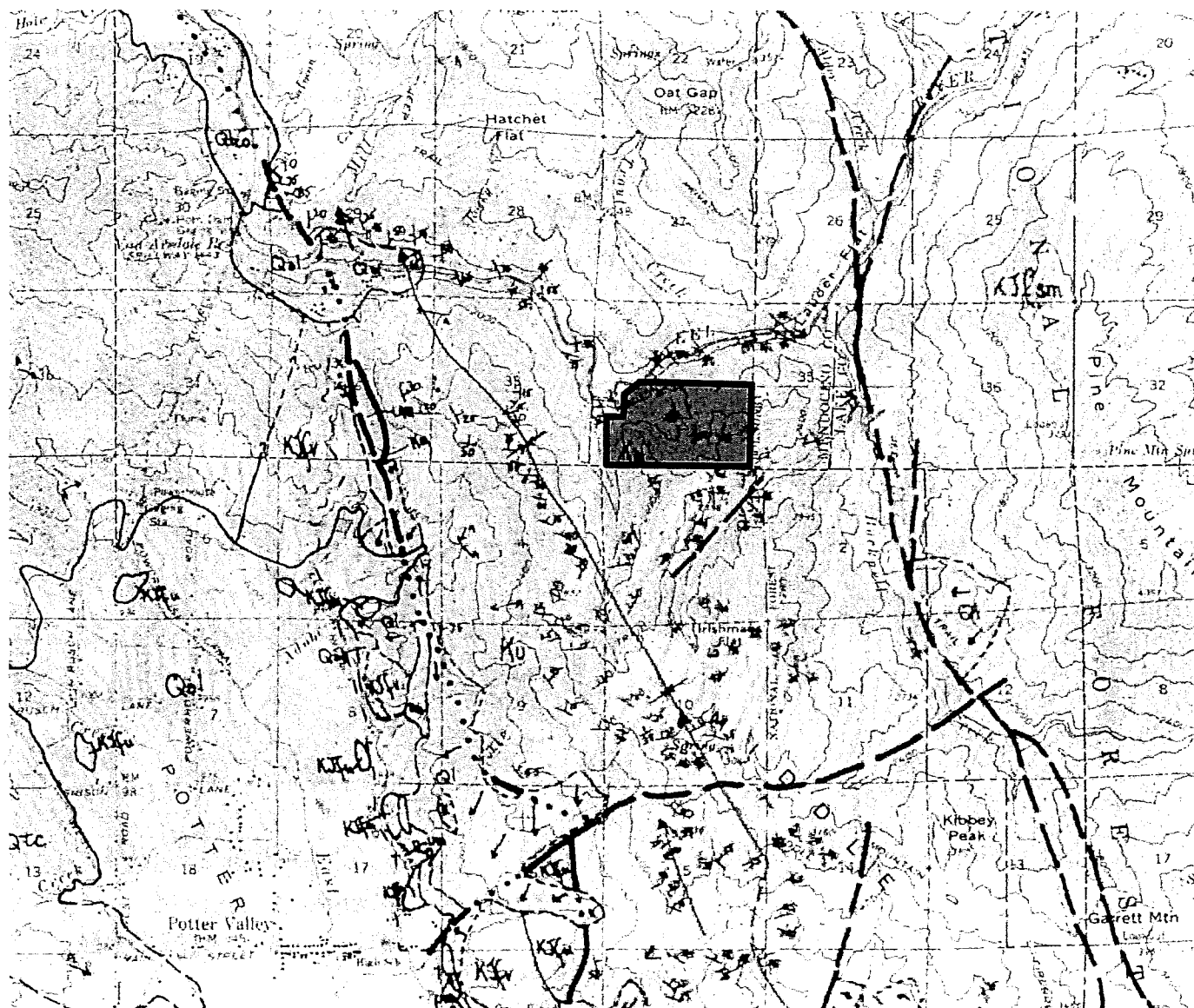
original signed by  
David Longstreth, CEG # 2068  
Senior Engineering Geologist



Concur

08/19, 2013 original signed by  
Date William R. Short, CEG # 1429  
Supervising Engineering Geologist  
Attachments: Figures 1, 2, and 3.





### Explanation

- Qa Alluvium
- Qte Alluvial Terrace
- Qtc Continental Terrace Deposits
- Ql Landslide, undifferentiated
- KJfu Central Belt Franciscan Formation
- KJfv Franciscan Volcanics
- KJfs Skunk Rock Melange
- KJfsm San Hedrin Member
- Ku Upper Great Valley Sequence

— — — Geologic contact, dashed where approximately located

↗ Landslide

75 Strike and dip of bedding

Shaded area represents estimated limits of proposed harvest area.



0 2604' 5208'

Base Map: Modified from Durham, J., 1979, Potter Valley 15' Quadrangle; California Department of Forestry, Title II Geologic Data Compilation Project, Unpublished, scale 1:62,500.

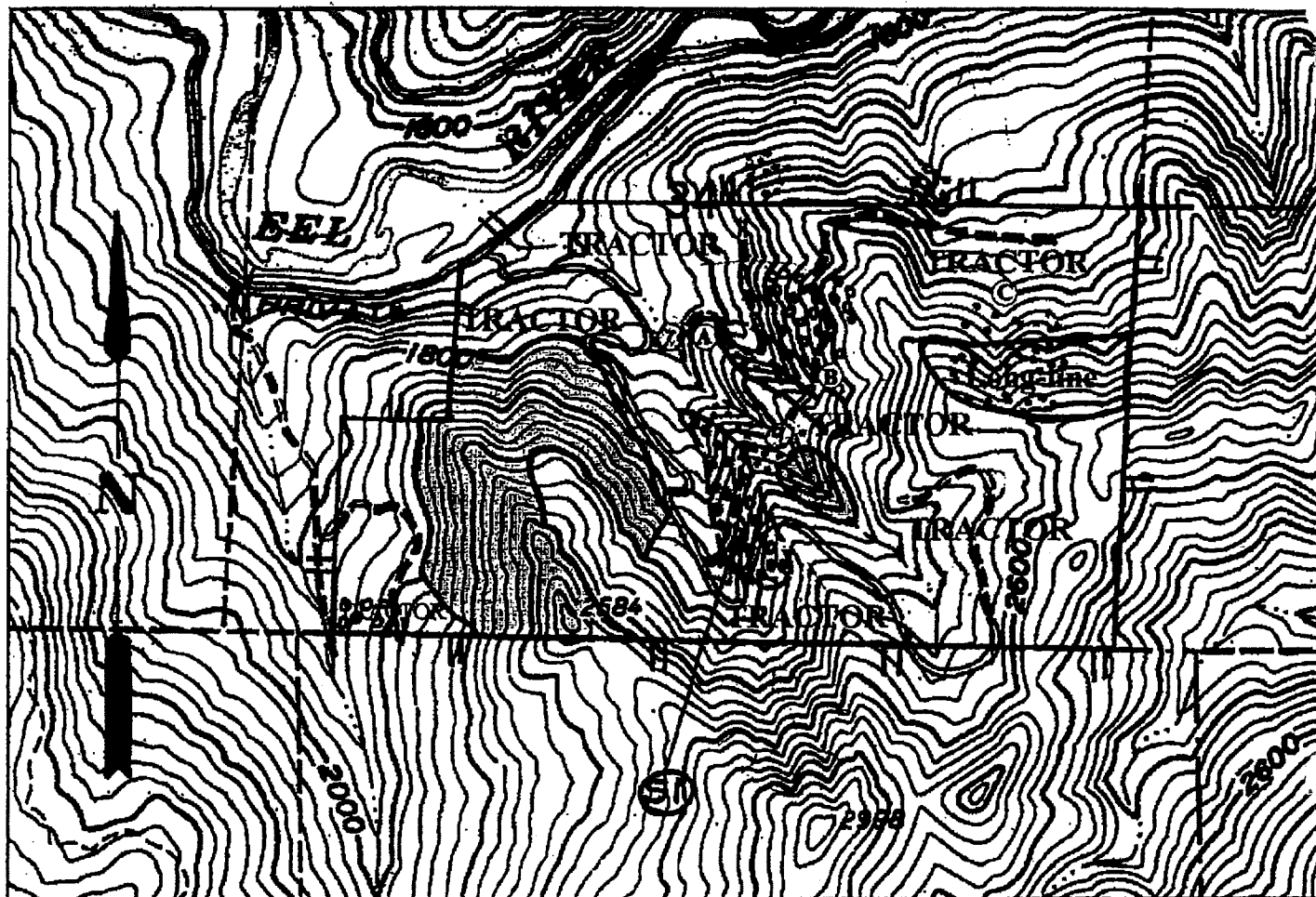
ite: Aug 2013

cale: 1" = 5208

Regional Geologic Map To Accompany Engineering  
Geologic Inspection of Water Storage Bladder Failure  
Franklin Property, Sec. 34, T18N, R11W MDB&M,  
Potter Valley 15 minute quadrangle, California

Figure:

1








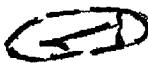




MAP A **GEOlogic Report**  
THP 1-94-375 MEN

**TIMBER HARVEST PLAN MAP**  
**"BIG MAX" THP**

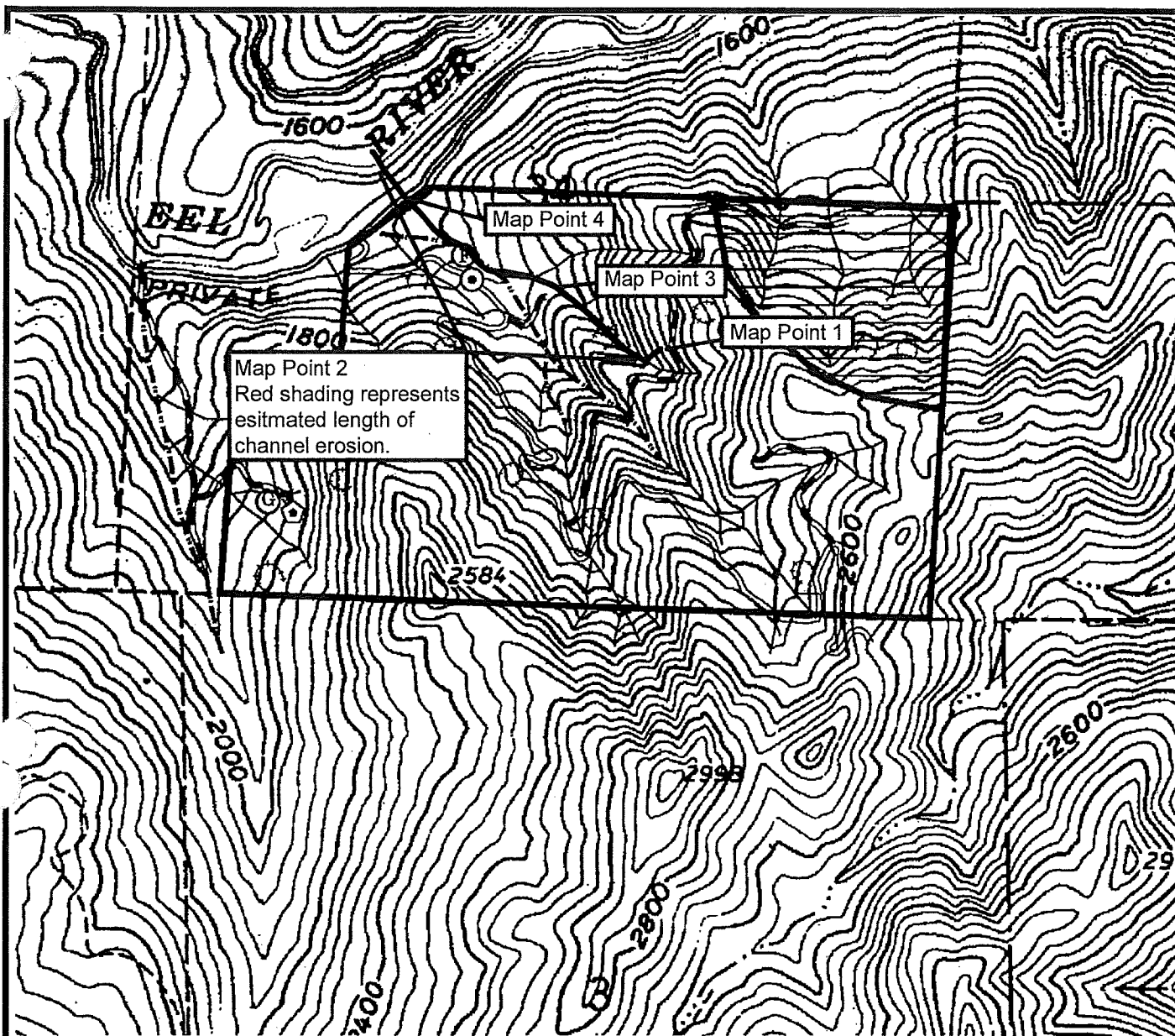
Comprising a portion of the S1/2 Section 34 T18N R11W MDB&M  
Potter Valley 15 min. Quad.

**MAP #4 YARDING/COMMENT**

THP Boundary        
Permanent Road        
Existing Seasonal Road        
Proposed Seasonal Road        
Comment Symbol      

*Dormant rotational slide*   
Yarding Boundaries        
Helicopter        
Tractor      **TRACTOR**  
Long-line      **Long-line**  
*Disrupted ground*        
*Debris Slide slopes*      

Scale 1 : 12,000




# McKee NTMP Unit 3 Operations Map












RECEIVED


JUL 12 2000

COAST AREA OFFICE  
RESOURCE MANAGEMENT

 = Estimated Observation Location

## PART OF PLAN

Project Area:   
 Existing Seasonal Road:   
 Existing Permanent Road:   
 Class II Watercourse:   
 Class III Watercourse:   
 Structure:   
 WLPZ Road or Skid Trail:   
 WLPZ landing:   
 ELZ Landing:   
 Slide Area:   
 Point in Text: 

Selection areas:   
 All other areas Transition  
 All areas Site III

T18N R11W MDB&M  
Portions of Section 34  
Potter Valley 7.5' Quad



Scale: 1" = 1000'

Site Map To Accompany Engineering Inspection  
of Water Bladder Failure, Franklin Property (revised 5/12/2015)

Figure: 3





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## National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:

Surface Water


Geographic Area:

United States

GO

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- [Full News](#) 

# USGS 11471099 POTTER VALLEY PH (TR ONLY) NR POTTER VALLEY CA

## PROVISIONAL DATA SUBJECT TO REVISION

[Available data for this site](#)

Time-series: Daily data



GO

[Click to hidestation-specific text](#)

### Available Parameters

- ☐ All 1 Available Parameters for this site
- ☒ 00060 Discharge(Mean)

### Period of Record

1975-10-01 2015-09-30

### Output format

- ☐ Graph
- ☐ Graph w/ stats
- ☐ Graph w/ (up to 3) parms
- ☐ Table
- ☐ Tab-separated

Days (3) **Summary of all available data for this site**  
**Instantaneous-data availability statement**

GO

-- or --

### Begin date

2013-04-2

### End date

2013-04-2

**Daily Mean  
Discharge,  
cubic feet per  
second**

DATE	Apr 2013
23	71 <sup>A</sup>
24	66 <sup>A</sup>
25	56 <sup>A</sup>
26	54 <sup>A</sup>
COUNT	4
MAX	71
MIN	54

### Explanation

A	Approved for publication -- Processing and review completed.
---	--

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**Title: USGS Surface-Water Daily Data for the Nation**

**URL: <http://waterdata.usgs.gov/nwis/dv?>**



Page Contact Information: [California Water Data Support Team](#)

Page Last Modified: 2016-11-26 14:41:03 EST

0.53 0.48 caww02



Nov 22<sup>rd</sup> 2016

Dear Mrs. Franklin,

We are disappointed to hear of the chain of events resulting from your installation of a Government Surplus 50,000 gallon flexible pillow tank that was originally manufactured by GTA Containers Inc.

GTA is the leading manufacturer of these military specification tanks which are extremely durable and typically provide years of service beyond their "shelf life". Based on our records it would appear that you may have purchased this tank slightly before its recommended storage life expired.

We commend your effort to provide water for fire-fighting purposes in a remote area and in light of the recent wild-fires and drought conditions we would have thought that the California Department of Forestry and Fire Protection and the Water Board would be very sympathetic to the financial distress that this effort has caused your family.

It is important to note that there are no published installation instructions on how to size a berm, or how to install a tank, as this is taught at specialty "schools" in the military. In that regard it would not have been possible for you to have consulted with a commercial installer. We are impressed with your installation on level ground and the construction of a berm wall to mitigate any leaks. Based on the height you mentioned, it would appear that you operated it at the recommended maximum height consistent with the capacity of 50,000 gallons.

The concept of a flexible tank is often misunderstood as there is no air in the tank and the fabric follows the fluid up and down with entrapped air escaping from the vent. When the elastic limit of the tank is reached the fluid will come out of the vent so in this regard it is hard to rupture a tank by overfilling alone. It is simply no possible to get anywhere near 80,000 gallons into this tank. The tank measures 25ft x 65ft when empty and these dimensions do not increase significantly in fact the

footprint decreases as the tank rises up. It is physically impossible for the tank to grow in length by 10ft.

In reviewing the photographs you sent it would appear that the tank did not have a seam failure but was more likely punctured by a sharp object such as a tree limb to wild animal. Once the reinforcing nylon fabric is damaged then an un-zipping of the tank can occur from end to end. Although there would be an initial rush of water that breached your berm, the velocity would decrease quickly as the tank height dropped and it may take 15-20mins for the tank to completely empty. The notion that 50,000 gallons of water rushed down the hillside would be completely false.

If your dispute concerning negligence on your part proceeds further, you may want to consider sending us back the section of the tank, about 2 ft. on either side of the failure, so we can perform a detailed analysis and generate a report as to the exact cause of the failure and the general condition of the fabric and its suitability for use.

If we can be of any further assistance please let us know.

Simon Addicott

VP GTA Containers Inc.



Olive Franklin, Trustee  
The Charles and Julia Franklin Trust  
Muckle Hill Farm, Spa Common, North Walsham, Norfolk UK  
[Mucklehill@yahoo.com](mailto:Mucklehill@yahoo.com)

November 22, 2016

Addendum to the letter of Justin Park, 10.3.2015, attached.

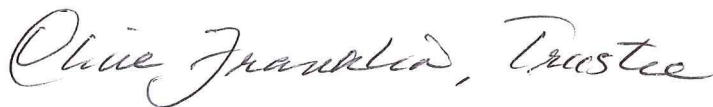
The attached was prepared by Justin Parks who was responsible for the oversight of the 50,000 gallon flexible storage tank. In the letter he says that he may have been responsible for the tank becoming overfilled leading to the subsequent failure of the bladder tank.

Information obtained from the tank manufacturer disputes this explanation. The tank had been designed with fail-safes to prevent overfilling.

It appears that the water tank did not burst, it was punctured by an external force. It is now unclear how much water there was in the tank at the time of the accident. Even at the time that Justin prepared his letter he seemed puzzled and said that he felt the tank could not have been completely filled, in fact, he inspected the tank at 10:30 on the night of the occurrence and he remembered the sides of the tank were not as high as 4ft 9". This makes sense because there would have been little or no water flow: rainfall records tell us that there had been no rain for more than 2 weeks.

Everyone was traumatized by the events that occurred after the incident with the tank and the fact that the Inspection Team told Daniel Franklin that the tank burst at a seam from being overfilled. Daniel of course took up the issue with Justin, saying that he must have allowed the tank to overfill. Justin, being a decent person assumed responsibility.

Respectfully,

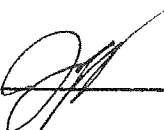
A handwritten signature in cursive script that reads "Olive Franklin, Trustee". The ink is dark and the handwriting is fluid.

Olive Franklin, Trustee

To Whom it may concern:

I, Justin Part, acknowledge that the following statements are true and correct.

I was staying on the property designated as 17777 Eel River Road, Potter Valley, California in the spring of 2013 with permission of Daniel Franklin. Part of my agreement with Daniel was that I would oversee the filling and maintenance of the 50,000 gallon water storage bladder kept on the above mentioned property. In the spring of 2013 I failed to turn the incoming water line to said water bladder completely off, and did not check on the fill level of the bladder. I believe the bladder may have become overfilled and this may have lead to the subsequent rupture of the bladder resulting in the discharge of collected springwater into the Eel River. The care of the bladder was my responsibility and Daniel believed I was fulfilling my commitment.

  
\_\_\_\_\_  
Justin Part

10-3-15  
October 3, 2015

Address:

Phone: 707-972-0100

Email: JustinP707@yahoo.com



# 2013-2014

## Freshwater Sport Fishing Regulations

Effective March 1, 2013 - February 28, 2014 unless otherwise noted herein.

### contact

**www.wildlife.ca.gov**

#### Headquarters

1416 Ninth Street, Sacramento 95814,  
(916) 653-7664

#### License and Revenue Branch

1740 North Market Blvd., Sacramento, CA  
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#### State of California

Governor Edmund G. Brown, Jr.

#### Natural Resources Agency

Secretary John Laird

#### Department of Fish and Wildlife

Director Charlton H. Bonham

#### Fish and Game Commission

Mr. Jim Kellogg, President

Mr. Michael Sutton, Vice President

Mr. Richard B. Rogers, Commissioner

Mr. Jack Baylis, Commissioner

Vacant, Commissioner

Mr. Sonke Mastrup, Executive Director

#### Participating in the Regulatory Process

The Fish and Game Commission is composed of five members appointed by the Governor and confirmed by the State Senate. The Commission sets hunting and sport fishing regulations including seasons, bag limits, methods and areas of take. In addition, the Commission formulates general policies for the Department of Fish and Wildlife and regulates aspects of commercial fishing. Monthly topical meetings are held to hear regulation change proposals. The public may make recommendations in writing before a Commission meeting or present its proposals verbally at the meeting. The Commission's meeting schedule, including specific topics, dates and locations, is posted on their web site [www.fgc.ca.gov](http://www.fgc.ca.gov). Written comments can be directed to the Fish and Game Commission at 1416 Ninth Street, Room 1320, Sacramento, CA 95814, or by e-mail to [fgc@fgc.ca.gov](mailto:fgc@fgc.ca.gov).

Alternate communication formats are available upon request. If reasonable accommodation is needed call CDFW at (916) 322-8911. The California Relay Service for the deaf or hearing-impaired can be utilized from TDD phones at (800) 735-2929.

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#### ON THE COVER

A boy shows off his catch at the Kern River Hatchery Trout Fest in Kernville, CA. CDFW photo courtesy of Jana Leiran.

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7.50 (b) Alphabetical List of Waters with Special Fishing Regulations		
Area or Body of Water	Open Season and Special Regulations	Daily Bag and Possession Limit
(57) <b>Deer Creek</b> (Yuba and Nevada cos.) from mouth to Smartville-Englebright Dam road crossing.	Fourth Saturday in May through Oct. 15. Only artificial lures with barbless hooks may be used.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
(58) <b>Diaz Lake</b> (Inyo Co.).	First Saturday in Mar. through Nov. 15.	5 per day 10 in possession
	Nov. 16 through the Friday preceding the first Saturday in Mar.	5
(59.5) <b>Dry Creek</b> and tributaries (Placer Co.) east of the Atkinson Street Bridge in Roseville.	Fourth Saturday in May through Oct. 15.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
(60) <b>Dry Creek</b> (Yuba and Nevada cos.) from mouth to Sid Smith Dam about one mile above junction of Scott Forbes and Peoria roads.	Fourth Saturday in May through Oct. 15.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
(61) <b>Eagle Lake and tributaries</b> (Lassen Co.).		
(A) Eagle Lake.	Saturday preceding Memorial Day through Dec. 31.	2 per day 4 in possession
(B) Eagle Lake inside the breakwater at the Gallatin Marina and Pine Creek Slough and Pine Creek below State Highway 44.	Closed to all fishing all year.	
(C) Eagle Lake tributaries, including Pine Creek above State Highway 44.	Saturday preceding Memorial Day through Nov. 15.	5 per day 10 in possession
(61.5) <b>Earl Lake/Talawa</b> (Del Norte Co.).	All year. Only barbless hooks may be used. Cutthroat trout minimum size limit: 10 inches.	2 cutthroat trout. 2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
(62) <b>Eastman Lake</b> (Madera and Mariposa cos.).	Also see Section 5.00 (Black Bass).	
(A) From the United States Corps of Engineers' buoy line 1000 feet south of the Raymond Bridge (Ben Hur Road) downstream to the United States Corps of Engineers' buoy line near the Codorniz boat ramp.	Aug. 1 through Nov. 30.	5
(B) From the United States Corps of Engineers' buoy line near the Codorniz boat ramp downstream to the dam.	All year.	5
(62.5) <b>Edson Creek</b> and all tributaries (Siskiyou Co.).	See McCloud River 7.50(b)(115).	
(63) <b>Eel River</b> (Humboldt, Lake, Mendocino and Trinity cos.). Also see Section 8.00(a). ALL WATERS OF THE EEL RIVER DRAINAGE EXCEPT THOSE LISTED BELOW ARE CLOSED TO ALL FISHING.		
(A) Main stem		

### ARTICLE 3. ALPHABETICAL LIST OF WATERS WITH SPECIAL FISHING REGULATIONS

#### 7.50. ALPHABETICAL LIST OF WATERS WITH SPECIAL FISHING REGULATIONS.

(a) General Provisions:

- (1) Every body of water listed below is closed to the take of salmon and salmon fishing, unless otherwise noted.
- (2) Unless otherwise provided, waters shown as open to trout and salmon fishing below, are open to fishing for other species. Every body of water listed below is closed to all fishing except during the open season as shown. Gear restrictions listed in this section apply to the take of all species of fish unless otherwise noted.
- (3) Unless otherwise provided, waters closed to trout and salmon fishing are closed to fishing for all other species, except that these closures do not apply to fishing for amphibians (see Section

5.05), freshwater clams (see Section 5.20), crayfish (see Section 5.35), and lamprey (see Section 5.40), using legal fishing methods other than hook-and-line fishing, and saltwater clams, crabs, ghost shrimp, and blue mud shrimp (see Ocean Regulations Booklet Sections 29.20 to 29.87). Crabs may only be taken using hoop nets or by hand, and Dungeness crab may only be taken within the North Coast District and Sonoma and Mendocino counties.

(4) Daily bag and possession limits, unless otherwise noted, mean the total number of salmon or trout in combination.

(5) Unless otherwise provided, it is unlawful to possess more than one daily bag limit.

(6) These waters may also be subject to restrictions on fishing methods and gear (sections 2.00 through 2.45), fishing hours (section 3.00), and the use of bait (sections 4.00 through 4.30).

<b>7.50 (b) Alphabetical List of Waters with Special Fishing Regulations</b>		
<i>Area or Body of Water</i>	<i>Open Season and Special Regulations</i>	<i>Daily Bag and Possession Limit</i>
(1) <b>Alambique Creek</b> (San Mateo Co.).	Last Saturday in Apr. through Nov. 15.	5 trout
(1.5) <b>Alameda Creek</b> and tributaries (Alameda and Santa Clara cos.).		
(A) Alameda Creek and tributaries downstream of San Antonio, Calaveras, and Del Valle Reservoirs except for Arroyo Del Valle between Bernal Ave. and the Thiessen St. intersection with Vineyard Ave.	Closed to all fishing all year.	
1. Arroyo Del Valle between Bernal Ave. and the Thiessen St. intersection with Vineyard Ave.	All year. Only artificial lures with barbless hooks may be used.	0
(B) Alameda Creek tributaries upstream of San Antonio, Calaveras, and Del Valle Reservoirs.	Last Saturday in Apr. through Nov. 15. Only artificial lures with barbless hooks may be used.	0
(2) <b>Albion River</b> (Mendocino Co.). Also see section 8.00(b).		
Main stem below the confluence of South Fork Albion.	Fourth Saturday in May through Mar. 31. Only artificial lures with barbless hooks may be used from the fourth Saturday in May through Oct. 31. Only barbless hooks may be used from Nov. 1 through Mar. 31.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
(3) <b>Alder Creek</b> (Mendocino Co.). Also see section 8.00(b).		
Main stem below Tramway Gulch.	Fourth Saturday in May through Mar. 31. Only artificial lures with barbless hooks may be used from the fourth Saturday in May through Oct. 31. Only barbless hooks may be used from Nov. 1 through Mar. 31.	2 hatchery trout or hatchery steelhead** 4 hatchery trout or hatchery steelhead** in possession
(4) <b>Almanor Lake tributaries</b> (Lassen, Plumas and Shasta cos.) upstream to the first lake.	Saturday preceding Memorial Day through Nov. 15.	5 per day 10 in possession



The principal issues involving municipal water supply quality are (1) protection of public health; (2) aesthetic acceptability of the water; and (3) the economic impacts associated with treatment- or quality-related damages.

The health aspects broadly relate to: direct disease transmission, such as the possibility of contracting typhoid fever or cholera from contaminated water; toxic effects, such as links between nitrate and methemoglobinemia (blue babies); and increased susceptibility to disease, such as links between halogenated organic compounds and cancer.

Aesthetic acceptance varies widely depending on the nature of the supply source to which people have become accustomed. However, the parameters of general concern are excessive hardness, unpleasant odor or taste, turbidity, and color. In each case, treatment can improve acceptability although its cost may not be economically justified when alternative water supply sources of suitable quality are available.

Published water quality objectives give limits for known health-related constituents and most properties affecting public acceptance. These objectives for drinking water include the U.S. Environmental Protection Agency Drinking Water Standards and the California State Department of Health Services criteria.

#### 2.1.12 NAVIGATION (NAV)

*Uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.*

#### 2.1.13 INDUSTRIAL PROCESS SUPPLY (PRO)

*Uses of water for industrial activities that depend primarily on water quality.*

Water quality requirements differ widely for the many industrial processes in use today. So many specific industrial processes exist with differing water quality requirements that no meaningful criteria can be established generally for quality of raw water supplies. Fortunately, this is not a serious shortcoming, since current water treatment technology can create desired product waters tailored for specific uses.

#### 2.1.14 PRESERVATION OF RARE AND ENDANGERED SPECIES (RARE)

*Uses of waters that support habitats necessary for the survival and successful maintenance of plant or animal species established under state and/or federal law as rare, threatened, or endangered.*

The water quality criteria to be achieved that would encourage development and protection of rare and endangered species should be the same as those for protection of fish and wildlife habitats generally. However, where rare or endangered species exist, special control requirements may be necessary to assure attainment and maintenance of particular quality criteria, which may vary slightly with the environmental needs of each particular species. Criteria for species using areas of special biological significance should likewise be derived from the general criteria for the habitat types involved, with special management diligence given where required.

#### 2.1.15 WATER CONTACT RECREATION (REC1)

*Uses of water for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, and uses of natural hot springs.*

Water contact implies a risk of waterborne disease transmission and involves human health; accordingly, criteria required to protect this use are more stringent than those for more casual water-oriented recreation.

Excessive algal growth has reduced the value of shoreline recreation areas in some cases, particularly for swimming. Where algal growths exist in nuisance proportions, particularly bluegreen algae, all recreational water uses, including fishing, tend to suffer.

One criterion to protect the aesthetic quality of waters used for recreation from excessive algal growth is based on chlorophyll a.

Public access to drinking water reservoirs is limited or prohibited by reservoir owner/operators for purposes of protecting drinking water quality and public health. In some cases, access to reservoir tributaries is also prohibited. For these water bodies, REC-1 is designated as E\*, for the purpose of protecting water quality. No right to public access is intended by this designation.

#### 2.1.16 NONCONTACT WATER RECREATION (REC2)

*Uses of water for recreational activities involving proximity to water, but not normally involving contact with water where water ingestion is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.*

Water quality considerations relevant to noncontact water recreation, such as hiking, camping, or boating, and those activities related to tide pool or other nature studies require protection of habitats and aesthetic features. In some cases, preservation of a natural wilderness condition is justified, particularly when nature study is a major dedicated use.

One criterion to protect the aesthetic quality of waters used for recreation from excessive algal growth is based on chlorophyll a.

#### 2.1.17 SHELLFISH HARVESTING (SHELL)

*Uses of water that support habitats suitable for the collection of crustaceans and filter-feeding shellfish (e.g., clams, oysters, and mussels) for human consumption, commercial, or sport purposes.*

Shellfish harvesting areas require protection and management to preserve the resource and protect public health. The potential for disease transmission and direct poisoning of humans is of considerable concern in shellfish regulation. The bacteriological criteria for the open ocean, bays, and estuarine waters where shellfish cultivation and harvesting occur should conform with the standards described in the National Shellfish Sanitation Program, Manual of Operation.

Toxic metals can accumulate in shellfish. Mercury and cadmium are two metals known to have caused extremely disabling effects in humans who consumed shellfish that concentrated these elements from industrial waste discharges. Other elements, radioactive isotopes, and certain toxins produced by particular plankton species also concentrate in shellfish tissue. Documented cases of paralytic shellfish poisoning are not uncommon in California.

#### 2.1.18 FISH SPAWNING (SPWN)

*Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.*

Dissolved oxygen levels in spawning areas should ideally approach saturation levels. Free movement of water is essential to maintain well-oxygenated conditions around eggs deposited in sediments. Water temperature, size distribution and organic content of sediments, water depth, and current velocity are also important determinants of spawning area adequacy.



The Water Board vs Dan Franklin and the Charles and Julia Franklin Trust, Olive Franklin, Trustee  
Case Rebuttal ACLC R12016-0033

Refer to Exhibit List 9:



May 30, 2013

TO : Warden Steven Crowl, California Department of Fish and Wildlife (CDFW)

FROM : Rick Macedo, CDFW

SUBJECT : Incident Involving Failure of a Water Storage Bladder Affecting an Unnamed Class II Stream and the Eel River Below Lake Pillsbury on the Franklin Property

On May 24, 2013 you and I participated in a site visit scheduled and attended by Stormer Feiler from the North Coast Regional Water Quality Control Board. The purpose of this site visit was to inspect areas affected by the subject incident. Also present were the landowner Daniel Franklin, the landowner's "business partner" (name?) and Dave Longstreth from the California Geological Survey.

Mr. Franklin reported being absent with the bladder failed. Based on reports from various sources including a phone call I received from Phillip Harrison who was working on a neighboring property, the incident occurred between 1700 hours on April 24 and 0630 hours on April 25. This incident was caused by an over-filled water storage bladder located adjacent to a non-fish bearing stream (aka Class II) that discharges directly into the main-stem Eel River. The 25X65 foot bladder is reported designed to hold up to 50K gallons of water. Operator error resulted in a partially open valve filling the bladder to an estimated 80K gallons of water before it burst along a seam and instantaneously emptied its entire contents into the adjacent Class II stream. Water and sediment were subsequently transported downstream, flowing over the M8 Road (aka "Logging Road") and discharging into the Eel River near a location known as "Hippie Rock".

The subject water bladder was used for irrigation and fire protection. The bladder is emptied during the winter period and filled beginning in the late winter/early spring. Two reported water sources are used to fill the bladder. Point of Diversion (POD) #1 is upslope of the bladder site and on the next drainage that lies immediately West of the damaged stream. Water is gravity fed from POD #1 to a 2.5K gallon rigid plastic water tank then to the bladder. POD #1 is used until it dries.

POD #2 is down slope of the water bladder and on a small tributary to the stream that is the source for POD #1. Water from POD #2 is gravity fed to a 1K plastic tank, then

pumped upslope and eventually enters the water bladder after going through the same 2.5K gallon rigid plastic tank that's used for POD #1. While the source for POD #1 goes dry, the source for POD #2 maintains perennial flow and is reportedly used throughout the summer.

The Class II stream affected by the failed bladder has a steep gradient and a well-confined channel over most of its reach. The near-immediate release of an estimated 80K of water resulted in the following observed and/or reported events: a) complete scour down to bedrock or pseudo-bedrock of virtually the entire stream from the point of entry to the M8 road, b) near complete removal of vegetation along the bed and bank, c) complete removal of aquatic invertebrates/vertebrates (insects, amphibians and reptiles), d) damage to an existing culvert-type road crossing on the Franklin property between the entry point and the M8 Road, e) damage to the culvert crossing on the M8 Road, f) discharge of sediment directly into the Eel River and g) increased turbidity for an unknown distance in the Eel River downstream of the entry point (note, CDFW staff working approximately three miles downstream at the Van Arsdale Fisheries Station reported significant turbidity at the facility following this incident).

Figure 1 is a map showing locations for the water bladder, POD #1, POD #2 and where the affected tributary discharged water/sediment into the Eel River. Figure 2 is a photo of the collapsed water bladder. Figure 3 is a photo of the impacted channel. Figure 4 is a photo near POD #1. Figure 5 is a photo of POD #2. Figure 6 is a photo where the impacted stream discharged water/sediment into the Eel River.

Following are the GPS coordinates for various points of interest (NAD 83):

POD #1:	39° 21' 56.8"N/123° 03' 47.1"W
POD #2:	39° 22' 06.6"N/123° 04' 02.5"W
Water Bladder:	39° 22' 05.6"N/123° 03' 52.9"W
1K Tank Near POD #2:	39° 22' 08.1"N/123° 04' 03.2"W
Eel River Entry Point:	39° 22' 17.9"N/123° 04' 12.9"W
Affected M8 Road Xing:	39° 22' 17.1"N/123° 04' 11.6"W

In my opinion, site preparation and operation of the water storage bladder should have required a lake/streambed alteration agreement (LSAA) pursuant to section 1602 of the Fish and Game Code. Construction of the pad and berm used to support the bladder has "substantially changed" the natural "bank" of the affected stream. In addition, water diversions at PODs #1 and #2 likely resulted in an activity that "substantially diverts" the natural flow of the affected streams. In addition, failure of the water bladder and the resulting discharge of sediment into the Eel River were, in my opinion, a violation of

section 5650 of the Fish and Game Code. Sediment, when released during this period and in the quantity released into the Eel River, was likely "deleterious to fish" [5650(a) (6)]. Issuance of an LSAA allows CDFW the opportunity to review projects and propose conditions that serve protect important plant, fish and wildlife resources.

After completing the site visit, I conclude that this incident resulted in notable adverse impacts to plant, fish and wildlife resources in the affected stream and in the Eel River. In addition, water diversion at PODs #1 and #2 are likely causing additional impacts by depleting stream flows to a level that is adversely affecting aquatic species. To mitigate for these impacts, I recommend that the landowner address erosion sources on the affected property and obtain an LSAA prior to conducting work in/near streams and/or diverting water from streams.

With the exception of road crossing work at the M8 Road and the damaged private road crossing upslope of the M8 Road on the Franklin property, I did not observe areas within the affected stream channel that would notably benefit from habitat restoration work. However, I did observe numerous erosion sources along the access road on the Franklin property. To mitigate for impacts caused by the subject incident, I recommend that the landowner be required to complete the following:

- 1) Obtain a LSAA from CDFW prior to diverting water from streams or other conducting other activities that may substantially alter the bed, bank or channel of any stream.
- 2) Retain a licensed engineer or other appropriate licensed professional to develop a comprehensive erosion control plan for the property. This plan will focus on various erosion and sediment delivery issues caused by roads, trails, modified stream channels and other observable features.
- 3) In consultation with CDFW and other interested agencies, implement projects that were developed by the comprehensive erosion control plan.

This concludes my report. If needed, I have numerous additional photos on file. Please contact me if you have questions or need my assistance involving your investigation and planned course of action.

ec: Stormer Feiler (NCRWQCB)  
Dave Longstreth (CGS)

Wes Stokes, Tony LaBanca, Scott Harris, Scott Koller, Terra Fuller,  
Scott Bauer (CDFW)

Figure 1. Locations for water bladder, point of diversion (POD) #1, POD #2, and sediment discharge point at the Eel River.

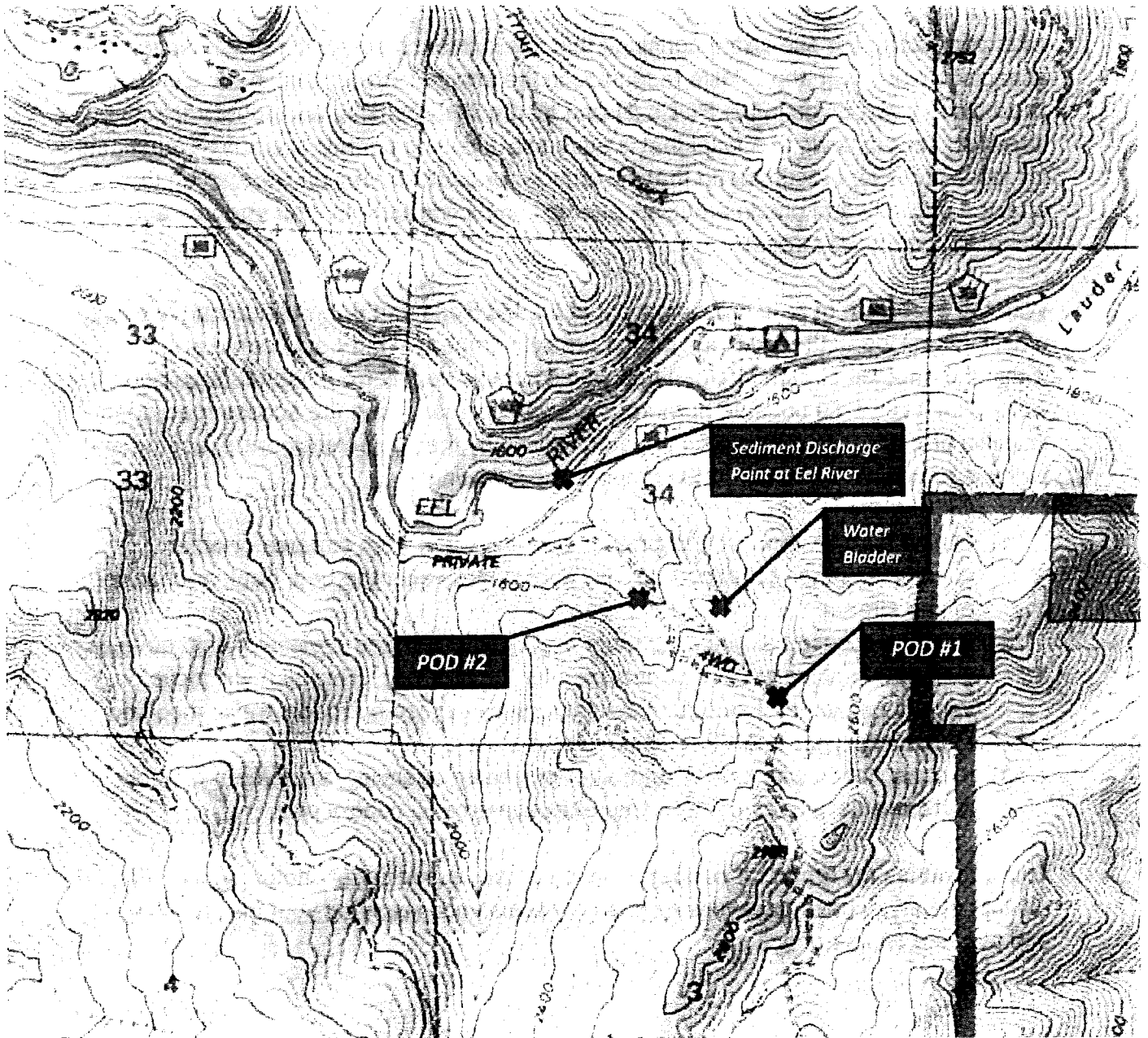


Figure 2. Collapsed water bladder.



Figure 3. Impacted channel.



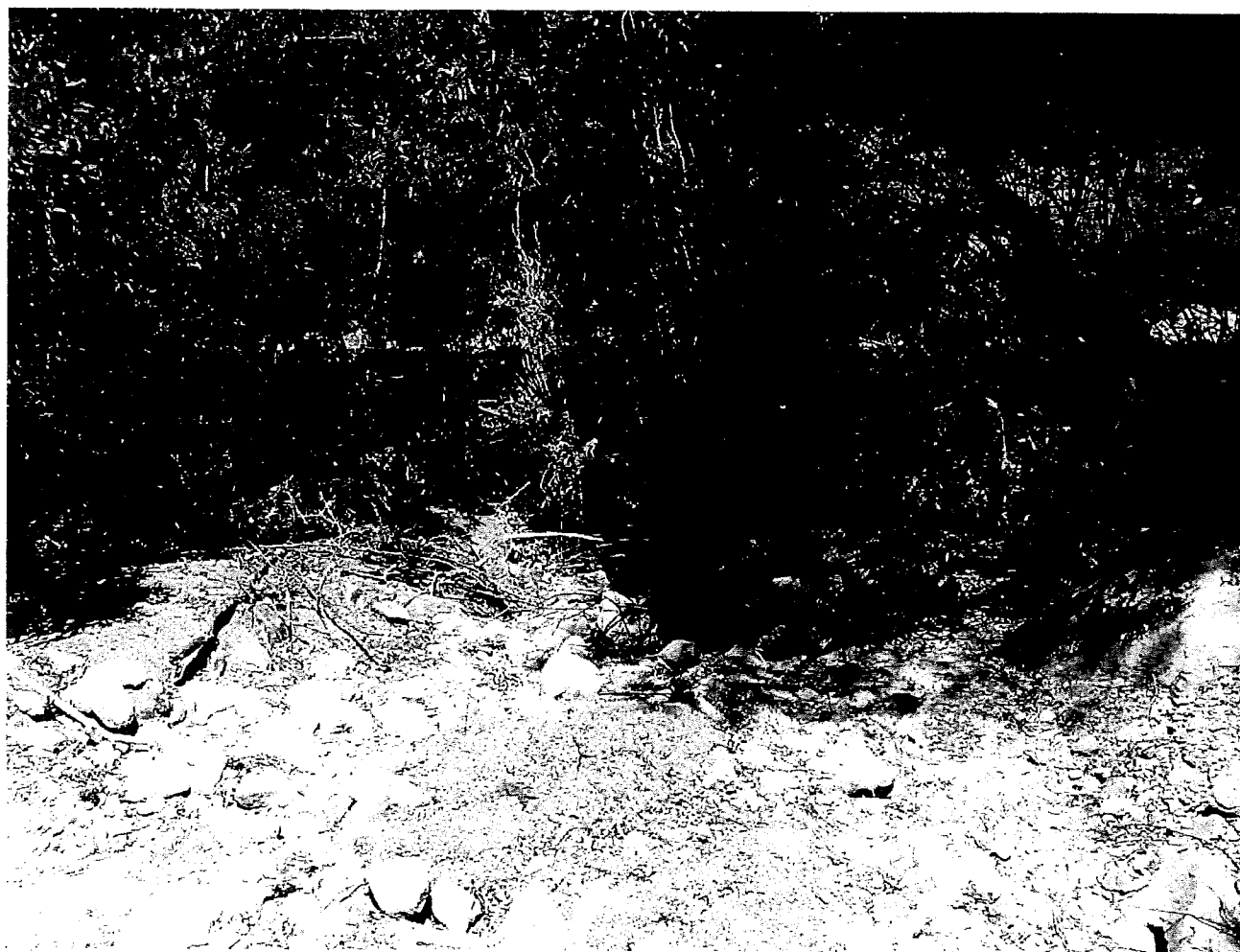
Figure 4. Near point of diversion (POD) #1.



Figure 5. Near point of diversion (POD) #2.



Figure 6. Area where the impacted stream discharged water/sediment into the Eel River.







Revised November 21, 2016

## **Franklin Trust Stream Recovery Report**

### **Project Description**

The subject Franklin Trust property is located at 17777 Eel River Road, Mendocino County, California. A Class III stream was damaged when a 50,000-gallon water bladder failed, spilling spring water into the Class III stream channel. The landowner immediately contacted California Department of Fish and Wildlife (CDFW). An inspection was then performed by CDFW and the North Coast Water Quality Control Board (WQ). WQ prepared a Complaint Inspection Report (April 30, 2014) to document the damages. This Stream Recovery Report has been prepared to document the recovery that has occurred since the water spill.

### **Photo Documentation**

The following photos were taken January 2, 2015.

Photo 1: Looking down slope adjacent to bladder site.



Photo 2: Above the stream channel, looking upslope towards bladder site.



Photo 3: Looking downslope at stream, below bladder site.



Photo 4: Looking upstream approximately halfway between the bladder site and the Eel River



Photo 5: View of the substrate at mid-slope location



Photo 6: Looking upslope from above the Forest Service M8 Road



Photo 7: View of substrate, above M8 Road.



Photo 8: Looking upstream above the Eel River confluence



Photo 9: The stream's outlet into the Eel River's sandy bank.



## **Erosion Observations**

The stream banks appear to have been steeply incised before the April 2013 water spill incident. Channel down cutting or side channel scour varied by location, but in general, on most of the stream channel, stream bank scour appeared to be primarily limited to removal of the surface soil horizon with limited scour into the root zone of bank vegetation. While in-channel down cutting occurred near the tank, this effect diminished as the water moved down stream. Considering there is no baseline measurements for the affected watercourse, it is difficult to quantify the channel scour in sections. Sections of existing bedrock are common in streambeds of tributaries to the Eel. Additionally, the erosion estimates provided by the NCRWCB, do not factor in a tapering of flow, which would have occurred as the 50,000 gallon pulse dissipated over the course of the approximately 2000 ft. stream bed. As a result, as shown in photos 6-8 the stream channel most likely experienced a lesser degree of erosion as it approached the confluence with the Eel. Generally, erosion was more severe higher in the drainage, closer to the water bladder, although substrate and site topography affected the severity in any given location.

The 2014 report from NCRWCB varies in its own estimates of sediment transfer, ranging from 1629.6 cubic yards suggested by their Environmental Scientist, to 518 cubic yards, as provided by Mr. Longstreth (CGS). The disparity in these numbers is worth noting. Perhaps this is based on the Water Board's assumption that 80,000 gallons of water was supposedly spilled out of a 50,000 gallon water bladder (4/30/2014 NCRWQCB Complaint Inspection Report, 14). The NCRWCB report claims the pulse flow removed "most of the instream gravel and cobbles" (14) which is not consistent with photos taken by NCRM, as seen in the diversity of substrate in photos 5&6.

NCRM did not find the reference stream to be a comparable drainage of "similar size" (4/30/2014 NCRWQCB Complaint Inspection Report, 6). The impacted watercourse has a watershed of approximately 33 acres, while the reference, unimpacted stream has an area of 117 acres, making it over 3 times larger. The Class II reference stream is also fed by multiple perennial springs that affect its seasonal hydrology. Also, the Class III watercourse is an ephemeral drainage as mapped on the Unit 3 NTMP (1-00NTMP-019 MEN/LAK) maps at the ownership.

## **Recovery Observations**

When the stream bed was observed January 2, 2015 by Registered Professional Forester Estelle Clifton, the streambed was stabilized. No fresh side channel erosion or sloughing was observed. This is notable given the early December 2014 storm that brought flooding to the region. Water in the stream flows clear and the stream bed contains a diversity of substrate, providing potential sheltering structures for aquatic organisms. Many sections of the watercourse are recovering from the water flow, revegetating both in and outside of the stream channel, such as the ferns observed in photo 3.

If you have any questions or comments regarding this report, please do not hesitate to contact me.



Estelle P. Clifton  
NCRM, Inc.  
PO Box 435  
Calpella, CA 95418  
(707) 485-7211 ext.220



Images of Affected Stream near the M-8, November 17, 2016  
Note the recovery of the streambed and the streambank vegetation.







TECHNICAL MANUAL

OPERATOR AND UNIT MAINTENANCE MANUAL  
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

TANK, FABRIC, COLLAPSIBLE, FUEL STORAGE

3,000 GALLON, MODEL WTM3KF (EIC = ZVM)/  
MIL-T-52983B (EIC = ZC8)

(NSN 5430-01-433-8528)/(NSN 5430-00-268-8187)

10,000 GALLON, MODEL BA91-141 (EIC = ZF3)/BA91-141A (EIC = ZVL)  
FCE574-81-1-A (EIC = ) (EXTRA ACCESSORIES)/  
SC5430-97CLE01 (EIC = ZFN)

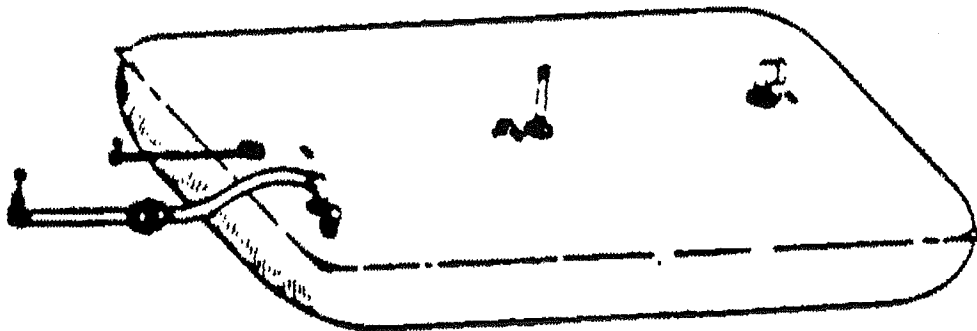
(NSN 5430-01-358-6157)/(NSN 5430-01-414-9251)

(NSN 5430-00-052-3412)/(NSN 5430-00-641-8552)

20,000 GALLON, MODEL BA91-140 (EIC = ZF2)/  
BA91-140A (EIC = )/BA92-162 (EIC = ZFR)

(NSN 5430-01-359-4943)/(NSN 5430-01-414-9252)/  
(NSN 5430-01-215-7525)

50,000 GALLON, MODEL PD52983-50 (EIC = )/M52983-50 (EIC = ZFB)  
(NSN 5430-01-455-5676)/(NSN 5430-00-182-8181)



This manual supersedes TM 5-5430-219-13, dated 31 August 1987, TM 5-5430-210-12, dated 30 November 1978, and TM 5-5430-219-23P, dated 31 August 1988, including all changes.

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HEADQUARTERS, DEPARTMENT OF THE ARMY

28 DECEMBER 2001

DESTROY SUPERSEDED DATA.

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Original 28 December 2001

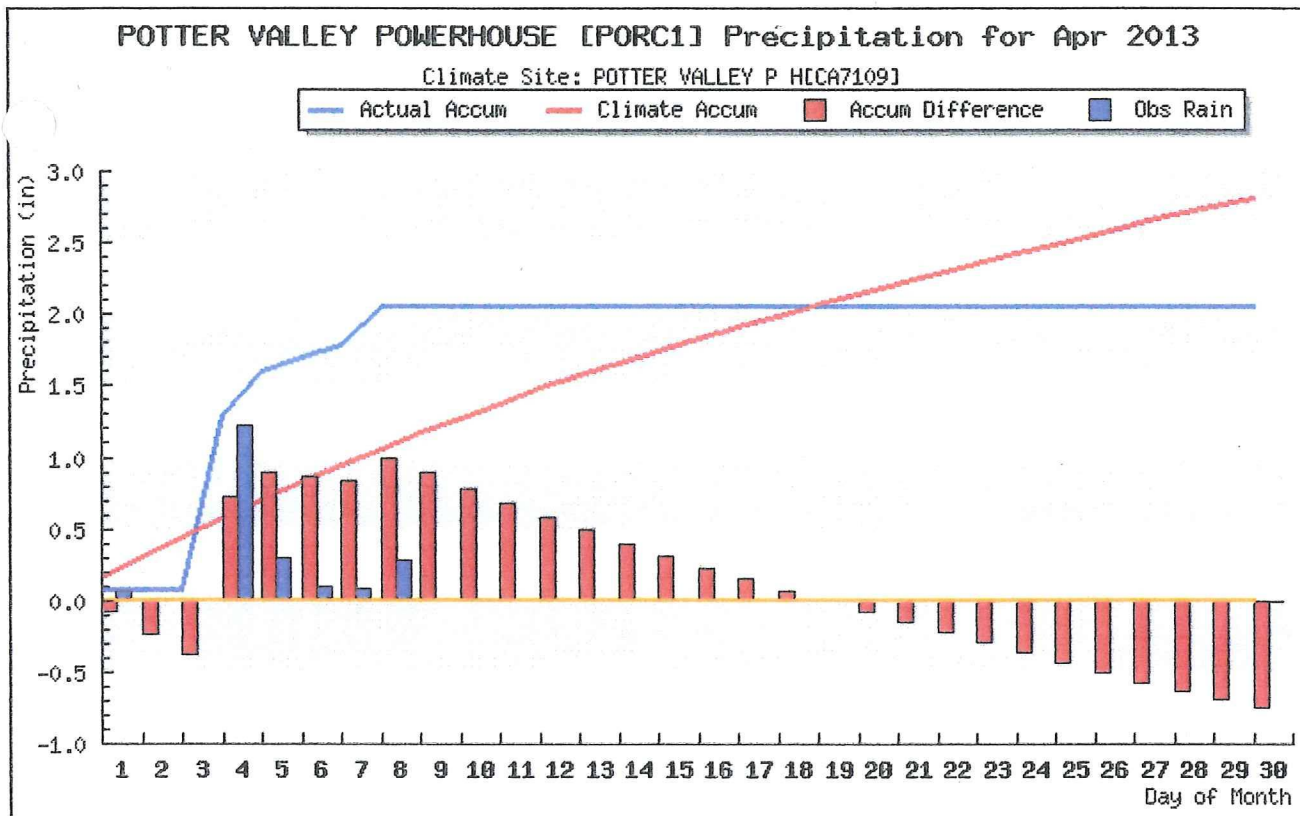
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WP 0003 00 (2 pgs)	0	WP 0031 00 (2 pgs)	0
Chap 2 title page	0	Chap 6 title page	0
WP 0004 00 (2 pgs)	0	WP 0032 00 (2 pgs)	0
WP 0005 00 (18 pgs)	0	WP 0033 00 (8 pgs)	0
WP 0006 00 (4 pgs)	0	WP 0034 00 (6 pgs)	0
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WP 0013 00 (2 pgs)	0	Glossary 1 thru Glossary 2	0
Chap 5 title page	0	Index 1 thru Index 6	0
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WP 0022 00 (2 pgs)	0		
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WP 0024 00 (4 pgs)	0		

\*Zero in this column indicates an original page.

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**Description:** Here is a chart of the monthly precipitation data. The red line would be an average month while the blue line and bars are observations.

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**Search Site with Google**

Enter search term

Mar 2013

April 2013

May 2013

Monday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>31</b>	<b>01 (@04 PM)</b> High: 65 Low: 45 Rain: 0.07	<b>02 (@03 PM)</b> High: 72 Low: 45 Rain: 0.00	<b>03 (@04 PM)</b> High: 77 Low: 41 Rain: 0.00	<b>04 (@04 PM)</b> High: 77 Low: 48 Rain: 1.22	<b>05 (@04 PM)</b> High: 61 Low: 50 Rain: 0.30	<b>06 (@04 PM)</b> High: 65 Low: 50 Rain: 0.10
<b>07 (@04 PM)</b> High: 65 Low: 50 Rain: 0.08	<b>08 (@04 PM)</b> High: 66 Low: 40 Rain: 0.28	<b>09</b> High: Low: Rain: 0.00	<b>10 (@04 PM)</b> High: 81 Low: 42 Rain: 0.00	<b>11 (@04 PM)</b> High: 80 Low: 41 Rain: 0.00	<b>12 (@04 PM)</b> High: 77 Low: 37 Rain: 0.00	<b>13 (@04 PM)</b> High: 77 Low: 40 Rain: 0.00
<b>14 (@04 PM)</b> High: 66 Low: 35 Rain: 0.00	<b>15 (@04 PM)</b> High: 60 Low: 34 Rain: 0.00	<b>16 (@04 PM)</b> High: 64 Low: 30 Rain: 0.00	<b>17 (@04 PM)</b> High: 69 Low: 33 Rain: 0.00	<b>18 (@04 PM)</b> High: 77 Low: 37 Rain: 0.00	<b>19 (@04 PM)</b> High: 79 Low: 42 Rain: 0.00	<b>20 (@04 PM)</b> High: 80 Low: 40 Rain: 0.00
<b>21 (@04 PM)</b> High: 86 Low: 42 Rain: 0.00	<b>22 (@04 PM)</b> High: 88 Low: 45 Rain: 0.00	<b>23 (@04 PM)</b> High: 88 Low: 53 Rain: 0.00	<b>24 (@04 PM)</b> High: 84 Low: 39 Rain: 0.00	<b>25 (@04 PM)</b> High: 85 Low: 41 Rain: 0.00	<b>26 (@04 PM)</b> High: 85 Low: 41 Rain: 0.00	<b>27 (@03 PM)</b> High: 86 Low: 41 Rain: 0.00
<b>28 (@04 PM)</b> High: 89 Low: 42 Rain: 0.00	<b>29 (@04 PM)</b> High: 89 Low: 47 Rain: 0.00	<b>30 (@02 PM)</b> High: 84 Low: 43 Rain: 0.00	<b>01</b>	<b>02</b>	<b>03</b>	<b>04</b>



1  
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3  
4  
5  
6  
7  
8 BEFORE THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
9 FOR THE NORTH COAST REGION  
10

11  
12 DECLARATION OF DANIEL FRANKLIN  
13

14  
15 I, Daniel Franklin, do hereby declare as follows:

16 1. The following is based upon personal knowledge except for those matters for  
17 which I declare on information and belief. I have personal knowledge of the following facts and  
18 am competent to testify as to their truth.

19 2. My current legal place of residence is 17777 Eel River Road in Potter Valley,  
20 California. During 2012 and 2013, I lived at 27860 Poppy Drive, Willits, CA 95490. At present,  
21 I stay in a travel trailer at 17777 Eel River Road or sleep at friends' houses in Ukiah. In my 15  
22 years of occasionally living on the Eel River property, I have not built myself a house, only a one  
23 room shack to store curing fruits, vegetables and meats (and to sleep in during the winter  
24 sometimes). My residence there has never been more extravagant than a small trailer, powered  
25 by propane, which I traded goods and services to obtain.

26 3. The Eel River property is a place that I had also spent years and years on growing  
27 up while hiking, fishing, swimming, and hunting in the area. Because of my love for this area, the  
28

1 family trust eventually purchased the land from a childhood friend and his family after my  
2 grandparents passed away. I live here for the surroundings and its capability of producing food  
3 and supporting a healthy, holistic lifestyle, with very little money needed. I like having trees and  
4 wildlife as my home. I want to wake and smell only clean air, drink and taste only pure water, eat  
5 and be nourished only of food brought forth from healthy earth. To this end, I do not use  
6 pesticides or inorganic fertilizers on any crops grown on this property.

7 4. I am not currently employed. My past employment history for the last three (3)  
8 years has consisted of working as a Deli Clerk at Safeway Corporation from March through April  
9 of 2015. I have never filed for bankruptcy.

10 5. My main source of income is from my mother, Olive "Polly" Franklin, rental  
11 income from the Franklin Trust's rental house in Willits, and the sale of firewood from our Eel  
12 River property. My total income for each year from 2012 to 2014 was less than \$6000 per year. I  
13 also get food stamps that I use for groceries.

14 6. My expenses are predominantly for food, personal care products, and gasoline.  
15 However, after 2012, I have not had a car or a driver's license, but I provided gas money to  
16 friends to drive me out to the Eel River Road property or into town to get groceries.

17 7. I have no personal assets of value. The Franklin Trust owns the property at 17777  
18 Eel River Road in Potter Valley, which is valued at between \$200,000 and \$250,000, and the  
19 rental house on Poppy Drive in Willits, which is valued at approximately \$150,000 and has a  
20 mortgage of approximately that amount as well.

21 8. A water bladder was purchased for the Eel River Road property by Chris  
22 Thurman, who put the bladder on the property initially without my knowledge. He and I had  
23 previously discussed fire danger in that location and the need for water storage. He came across  
24 this bladder and bought and installed it on the land for that reason. I only tacitly provided  
25 permission for maintaining the bladder on the property after the fact, although it is not actually  
26 "my" property as it is owned by the Franklin Trust. The purpose of the bladder was to store water  
27 for fire protection after the California lightning fires of 2008.

28

1           9.     A gentleman named Justin Park was responsible for monitoring the filling of the  
2 water bladder in exchange for being allowed to live on the property. He was the one in charge  
3 before and during the bladder incident that occurred on or about April 24/25 of 2013.

4           10.    In addition to collecting firewood from the Eel River Road property, we have also  
5 grown limited crops there. At that time that the water bladder burst, no crops were being grown  
6 on the Eel River property.

7           11.    I have not been involved in growing crops at the Poppy Drive property in Willits  
8 or any other property besides the Eel River Road property. None of the crops grown at the Eel  
9 River Road property were ever sold. The crop, if any, was divided between participants in the  
10 crop growing collective. The value of the crops grown is unknown as the crops were never sold,  
11 merely provided to the participants for personal use.

12          12.    The average acreage for crop production was within an area of approximately one  
13 fenced acre. Crops were planted in grow bags of between 4 and 7 foot diameters, spaced 15 feet  
14 apart for better light. The planted area averages about 3,500 square feet, or less than 1/10 of one  
15 acre.

16          13.    The average yield was between 25-50 pounds total plant weight. The yield was  
17 variable based on a great number of factors, including the weather, the growing conditions,  
18 contamination by male plant pollen, damage by animals (especially deer), mold, theft, etc.

19          14.    For example, in the fall of 2012, it rained several times and we did not have the  
20 ability to dry that crop and lost at least ½ the crop to mold. In the fall of 2013, there was a big  
21 rainstorm that broke many of the plants and, again, having no ability to dry that crop, we lost at  
22 least 1/3 of the crop to mold. In 2014, the crop growing collective was not active. I planted a few  
23 plants very late in the year, but because I didn't have a driver's license or a car or money to get to  
24 the property to tend the plants, the crop did not do well and there was very little to harvest.

25          15.    From 2011 to 2013, the crop growing collective normally grew about 90 plants a  
26 year. This equals 10 plants per member of our collective. We could grow more, but we don't  
27 need to grow more as 10 plants a year is enough for our individual needs.  
28

16. Crops on the Eel River property are grown with strict organic/biodynamic principles. As stated above, crops are grown outdoors with no pesticides, fungicides, or artificial fertilizers. No doubt a larger crop might be possible if such things were used, but since the crops are for personal use, and since we care about the environment, we don't want to contaminate it or the surrounding land and water.

17. Although not relevant to the water bladder incident, attached as Exhibit A is a true and correct copy of a current physician statement and recommendation identifying me as "a patient whose possession and/or cultivation of medical cannabis is permissible pursuant to California Health and Safety Code 11362.5 and Senate Bill 420." This document was issued on June 13, 2015 and is valid through June 12, 2016. I have had physician's statements for previous years as well, but do not have copies of them all.

18. Attached as Exhibit B is a true and correct copy of the signed statement of Justin Park, who was the operator in charge of the water bladder in the spring of 2013.

I declare under penalty of perjury pursuant to the laws of California that the foregoing is true and correct.

Executed this 5th day of October, 2015 at Calpeller, California.

*Daniel Franklin*  
Daniel Franklin, Declarant

Exhibit A

Physician Statement and Recommendation

Recommendation ID Number (REC ID) 0912 2284 7324 814

Patient Name DANIEL FRENCH FRANKLIN

Patient Identification

Limit Exemption No Exemption

Recommendation Issued 06/13/2015

Recommendation Valid Through 06/12/2016

Phone: 310-855-3629

Online: <https://verify.greenlifemedical.com>

Pursuant to California's Health and Safety Code Section 11362.5

The purpose of this medical document is to identify this individual as a patient whose possession and/or cultivation of medical cannabis is permissible pursuant to California Health and Safety Code Section 11362.5 and Senate Bill 420

This affirms the patient listed above has been examined and evaluated by the physician indicated on this document and that the physician is licensed to practice medicine in the State of California. It is their assessment that the above-mentioned patient qualifies under California Health and Safety Code Section 11362.5 for the use of cannabis for medical purposes. If this patient chooses to use cannabis therapeutically, the staff of the clinic indicated on this document will continue to monitor the status of this patient. The attending physician is responsible for only the medicinal cannabis aspect of medical care. This patient assumes full responsibility for any and all risks associated with this treatment option. The physician has discussed the potential medical benefits and risks of cannabis use.

This patient hereby gives permission for representatives of GreenLife Medical Systems to discuss the nature of their condition(s) and the information contained within this document for verification purposes. This is a non-transferable document. This document is the property of the physician indicated on this document and can be revoked at any time without notice. Void after expiration, if altered or misused.

Patient Signature: Daniel French Franklin

Physician Signature: Mary M. Lagano

Physician Name: Mary M. Lagano, D.O.

License Number: 20A2512

Clinic Name: Clinic Ananda

Clinic Address: 13270 Unit A, Hwy 101  
Hopland, CA 95449

Recommendation Verifiable By:  
GreenLife Medical Systems LLC  
Collective/Patient Support Line: 310-997-9352



Exhibit B

To Whom it may concern:

I, Justin Part, acknowledge that the following statements are true and correct.

I was staying on the property designated as 17777 Eel River Road, Potter Valley, California in the spring of 2013 with permission of Daniel Franklin. Part of my agreement with Daniel was that I would oversee the filling and maintenance of the 50,000 gallon water storage bladder kept on the above mentioned property. In the spring of 2013 I failed to turn the incoming water line to said water bladder completely off, and did not check on the fill level of the bladder. I believe the bladder may have become overfilled and this may have lead to the subsequent rupture of the bladder resulting in the discharge of collected springwater into the Eel River. The care of the bladder was my responsibility and Daniel believed I was fulfilling my commitment.

  
Justin Part

10-3-15  
October 3, 2015

Address:

Phone:

707-972-0100

Email:

JustinP707@yahoo.com



The Water Board vs Dan Franklin and the Charles and Julia Franklin Trust, Olive Franklin, Trustee  
Case Rebuttal ACLC R12016-0033

Refer to Exhibit List #16:

Links to tank failures:





***Gil Kuhn Appraisals***  
P.O. BOX 341  
REDWOOD VALLEY, CA 95470  
707 • 485 • 5132  
707 • 485 • 5133 (FAX)

January 6, 2015

Olive Franklin

[REDACTED]

[REDACTED]

RE: 17777 Eel River Road, Potter Valley, CA

Pursuant to your request, an analysis of the above referenced property has been performed. The purpose of this analysis is to ascertain the physical characteristics and background of the property and combine those with the available and appropriate sales of like kind properties in the attempt to render a credible estimate of Fair Market Value. This is the sole purpose of this analysis.

This analysis is performed without a physical inspection as the area and topography are well known to this appraiser. The subject is located in the northern Potter Valley area known as Van Arsdale, in the Eel River canyon. The topography is steep, upsloping from M-6, the former Louisiana Pacific Logging Road to the ridge top. That road has only been recently opened to the access point near the subject after being closed

covered in trees and brush. It was logged approximately 20 years ago and what trees remain will not be of harvestable size or quality for at least another 20 years. The property does have road easements that allow others to cross the land to connect to their properties rather than using Mid Mountain Road in central eastern Potter Valley as the main access point. Some property owners have placed locked gates on those other easement access roads making passage near impossible. That leaves access to those properties only possible via the subject, thus compromising its privacy. The road through the subject is in fair to poor repair and routine access by conventional vehicle would be problematic.

This is raw, rural land with no development; no power (electricity) with seasonal water only. Water is from two seasonal springs that flow into small streams and run to the river but are not a year around source. They dry up in spring and remain dry until the fall rains. There are two water storage tanks on site that are filled by the seasonal springs. But again, this 5000 gallon impoundment is not sufficient to allow for a year around source of water. In fact, at the normal rate of water use per person per day at 110 gallons, this volume is only a 45 day supply.

This is recreational use land given the lack of merchantable timber. Its access is difficult, its location is semi remote and its appeal is thus limited by these issues. It is not unlike other areas in this very rural county where large blocks of land have been logged and then split into smaller parcels and sold for "backwoods" recreational land uses. Some have been turned into residential use where water or power (or both) were available. But the subject has no such availability. There is no public electric power accessible. There are only seasonal springs on the property with limited production capabilities. What surface water exists

well was explored in the recent past but the cost was prohibitive and its rate of success was speculative. The development potential for the subject is minimal at best. It has a total land mass of 260 acres but that mass really equates to one large "campsite". It has no other practical use in its "as is" condition other than for recreational purposes. Even if the desire was to develop to the status of residential use, there is no infrastructure to support such a use and the location, access and topography tend to preclude the reasonable and economic development necessary to create the suitable environment for such a use. It is for all intents and purposes, "what you see is what you get", a steep, wooded, primitive hillside parcel with an ingress/egress road (an easement shared by other area landowners) in questionable condition, immature timber and seasonal creeks. In its current primitive state, it lacks privacy due to the easement use of the road, it lacks the essentials for development (sustainable water and electrical power) and the appeal to the market for the absence of developmental capabilities. It's one and likely only appealing feature is the small frontage on the Eel River and the well known "Hippie Rock", a swimming hole that is accessed via this frontage. Hardly a private area, it does allow the subject direct river access, again for recreational purposes.

A primitive, rural, semi remote property has limited market appeal. It is difficult to sell due to the limited appeal and lack of developmental potential. It is difficult to finance so that even if it were offered for sale the most likely sales terms would be an all cash sale or a sale involving seller financing. This is not the kind of property that would be eligible for conventional lender financing. These types of property are generally purchased with discretionary funds and during the recession, up to and

typically used for other purposes (ie. normal living expenses). This is not likely the type of property that would lure a wealthy buyer as it has very little to offer in terms of use, enjoyment or development.

Given the primitive nature and location of the subject, there has been little in the way of sales data in the past several years of subject similar properties. In fact, since 2012, throughout southern and central Mendocino County and all of Lake County (the subject is very near the Mendocino/Lake County border) for parcels of 100 acres or larger (eliminating vineyard lands), there have been only 28 sales. 28 sales in 24 months is an absorption rate of 1.16 sales per month. These properties do not sell readily. Some take literally years to sell. The range of sales prices of those 28 sales was from \$92,000 to \$812,500. The only sales breaking the \$1,000,000 mark were vineyard lands, either producing vineyards or land suitable for vineyard planting. As mentioned previously, subject similar properties were typically once a part of larger holdings that had the timber harvested years ago and then subdivided into smaller parcels for primitive recreational and/or residential use. This is the whole genesis of the Mid Mountain Road area of Potter Valley and its evolution. It began in the late 1950's and early 1960's with the "back to the earth" movement where one could live a self sustaining lifestyle on a rural parcel. This of course was considering one could develop an adequate and sustainable source of water and power as solar power at that time was in its infancy. As time passed, more people were drawn to this life style but never in significantly large numbers. Many similar parcels simply remained unsold as the holding costs were minimal to the owners and the appeal to the real estate market was minimal as well.

marketability such primitive properties have to the general real estate market. Without the ability to economically and practically develop such properties, they will remain of limited appeal to those who want to create their own "wilderness". In the analysis of such properties, physical size is not of essential importance. Parcels of smaller mass but possessing superior amenities like availability of (sustainable) water, power, general development, ease of access, developed road systems on site, other natural resources, all these issues and more will dictate the property value much more than merely physical mass. As property mass grows, the cost/price per acre is reduced. This is why a small parcel can sell for thousands of dollars per acre while a large parcel can sell for a few hundred dollars per acre. From the 28 available sales found from the noted market area, at 100 acres or more and selling since January, 2012, the best of that data is compared to the subject as follows:

Sale 1: [REDACTED], Potter Valley: This property is located near the top of Mt. Sanhedrin in the Mendocino National Forest (Lake County), bordering the Sanhedrin Wilderness area. It has standing timber, abundant springs and gentle topography but it is very remote. It contains 160 acres, zoned TPZ (like the subject) and is totally undeveloped. It sold on October 13, 2013 for \$160,000 in an all cash transaction after 227 days of market exposure (MLS#21303911, DOC#10607). The indicated value per acre for this parcel is \$1000/AC.

Pillsbury (Lake County), this 280 acre parcel is referred to as "North Glade" and sits just SW of the Snow Mountain Wilderness area. It has abundant springs, a pond and a live year round creek (Rice Creek). It has never been offered for sale before, being held by the descendents of the original patent holder. The topography is gentle, mostly in a huge, open meadow with some standing timber but mostly oaks. It is totally undeveloped including access road. A forest service road could connect this parcel to the outside world but at time of sale an easement was being worked on over the neighboring property for vehicle access. At time of sale, the only access was by foot, a mile +/- hike. It sold on May 20, 2013 for \$220,000 in an all cash transaction after 443 days of market exposure (MLS#21204066, DOC#7739). The indicated value per acre for this parcel is \$786/AC.

Sale 3: [REDACTED] This sale is also in Lake County and located between Lake Pillsbury and Upper Lake off Deer Valley Road in the Mendocino National Wilderness. It is secluded and private but accessible by vehicle. It has 160 acres, zoned TPA (as are all sales and subject), with topography similar to the subject, steep wooded hills with some open areas. This site has abundant water with one developed spring supplying a 2500 gallon holding tank. It sports two year around, spring fed ponds and history of good water production. It sold on March 22, 2013 for \$285,000 in a seller financed transaction after 282 days of market exposure (MLS#21301648,DOC#4409). The indicated value per acre from this parcel is \$1781/AC.

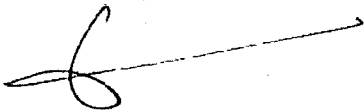
(Mendocino County), this parcel is 240 acres of rolling to steep topography covered in trees and brush. It is totally undeveloped, with no discovery or evidence of springs or any water source, nor were soils test performed as per broker. Accessed via vehicle over developed private roads and through multiple locked gates, this property is not necessarily distant from town but it certainly has remote access. It sold on August 8, 2013 for \$360,000 in an all cash transaction after just 76 days of market exposure (MLS#21312159, DOC#13547). The indicated value per acre from this parcel is \$1500/AC.

The common thread between these four sales, all were purchased for recreational purposes, as a place to go and camp, ride off road vehicles or horses or just to get away. They were not purchased as residential home sites. All but sale 4 has developed or developable water sources, to superior levels versus the subject. None have developed electrical power. All are a bit more difficult to access in terms of distance from main roads or communities than is the subject. Only sale 4 has similar topography to the subject but it is more rolling and less severe than that of the subject. The range of indicated values from these sales is \$786/acre for a property with no vehicle access at time of sale but abundant water and gentle topography to \$1000/acre for a significantly more remote parcel with springs and standing timber to \$1500/acre for a rugged parcel of similar size with no development that is close to town to \$1781/acre for a smaller parcel with vehicle access and abundant, developed water. The subject is much more like sale 4 in terms of size, topography and lack of development however, the subject has noted seasonal springs versus sale 4 having superior year around access and total privacy. The other sales provide superior

internal coverage, limited privacy, lack of a sustainable water source, lack of available public power and lack of merchantable timber, in the opinion of this appraiser, the final value for the property known as 17777 Eel River Road, Potter Valley, CA is \$1000/acre or \$260,000 (Two Hundred Sixty Thousand Dollars).

I trust you will find this analysis complete and in keeping with the original request. If you have any questions, comments or concerns, please advise. Thank you for allowing me to be of service to your family in this matter.

Yours,

A handwritten signature in black ink, appearing to be 'Gil Kuhn', with a long horizontal stroke extending to the right.

Gil Kuhn



## THE EEL RIVER, NORTHWESTERN CALIFORNIA; HIGH SEDIMENT YIELDS FROM A DYNAMIC LANDSCAPE

*Thomas E. Lisle*

The Eel River draining the Coast Range of northwestern California has the highest recorded average suspended sediment yield per drainage area of any river of its size or larger unaffected by volcanic eruptions or active glaciers in the conterminous United States (1,720 t/km<sup>2</sup>yr from 9,390 km<sup>2</sup>; Brown and Ritter, 1971). These high rates of erosion and sediment transport result from a combination of widespread tectonic deformation of the underlying rocks, recent rapid uplift of the landscape, high seasonal rainfall, and widespread disruption of the ground surface by man in the last century. Not surprisingly, the basin has some unusual geomorphologic characteristics. Sediment-transporting processes on hillslopes and in channels are closely linked, and as a result, high-magnitude, low-frequency climatic events are more responsible for forming channels than in most other areas.

### BASIN CHARACTERISTICS

#### *Geology*

The Eel River basin is underlain almost entirely by the Franciscan assemblage of complexly deformed, continental marine deposits of Late Jurassic to mid-Tertiary age (Bailey and Jones, 1964; Jones and others, 1978). The area has undergone uplift since mid-Miocene time (Bailey and others, 1964). Franciscan rocks are predominantly sandstone and shale, but also include tectonically emplaced blocks of volcanics and low-grade metamorphic rock. Bedrock has been pervasively sheared to various intensities over the basin. Zones of weakness trending generally north-northwest have created a trellis network of drainages. Narrow, deeply cut canyons incised below moderately dipping upper slopes, on which older soils are developed, attest to recent or ongoing uplift of the area, although local downwarping has formed isolated depositional basins in the Eel valley (Kelsey, 1982).

#### *Hydrology*

The Mediterranean climate of the area is conducive to the production of high sediment yields. Annual precipitation is heavy (averaging 1,500 mm basinwide and 2,800 mm at high elevations) and seasonal, with 90 percent falling between October and April. During winter, northern California has the highest latitudinal temperature gradients of any area in the Pacific Northwest (Janda and Nolan, 1979). This produces intense storms that commonly travel perpendicular to the trend of the Coast Range, which are as high as 2,000 m in the Eel basin. As a result, large cyclonic storms lasting several days have produced widespread rainfall totaling more than 250 mm on several occasions in the last 40 years (Harden and others, 1978).

Runoff from the basin, averaging 890 mm annually, is highly variable because of seasonality of rainfall, infrequent large storms, and poor retention of water in the basin. At Scotia (Fig. 24), the discharge equaled or exceeded 99 percent and 1 percent of the time equals 0.0004 m<sup>3</sup>sec<sup>-1</sup>km<sup>-2</sup> and 0.8 m<sup>3</sup>sec<sup>-1</sup>km<sup>-2</sup>, respectively (Rantz, 1972). Most importantly from a geomorphic standpoint, large flood flows are generated by moderately intense rain falling over the entire basin for a number of days and, in some cases, by snowmelt during warm winter storms (Harden and others, 1978). Little flood runoff is stored in the basin due to the steep slopes and constricted valley bottoms.

#### *Sediment yield*

High suspended-sediment discharges from this area result from a combination of high sediment concentrations (averaging 3,000 ppm over discharge at Scotia; Holum, 1968) and, particularly, high rates of runoff (Janda and Nolan, 1979). Gullying and mass movement accelerated by human disturbance of the erodible terrain provide inexhaustible supplies of fine sediment that can be carried quickly to stream channels (Nolan and Janda, 1982). With increasing precipitation, there is greater surface erosion of broken ground in active earthflows and on soil bared by grazing, timber harvesting, and road building. Also, increasing soil moisture and erosion of toes of streamside slides and earthflows can accelerate mass movement directly into channels. Finally, high annual precipitation in the basin does not promote a denser protective cover of vegetation than in areas with less precipitation. Little of the precipitation falling in winter can be utilized for plant growth, and under natural conditions the basin is already well vegetated except on steep hillslopes along downcutting channels. As a result, sediment discharge increases with annual precipitation in the Coast Range (Janda and Nolan, 1979), unlike most other areas (Langbein and Schumm, 1958; Wilson, 1973).

Also unlike most areas, suspended sediment discharge per unit area in the Eel River increases with basin size (Brown and Ritter, 1971; Janda and Nolan, 1979). Because of ongoing uplift, main channels are commonly more deeply incised than their tributaries, and so streamside landslides, which are major sources of sediment, are particularly abundant along main channels. Parent material is generally soft and friable, and thus, bed particles rapidly break down into smaller sizes (Knott, 1971). Consequently, suspended-sediment load increases downstream at the expense of bedload (Brown and Ritter, 1971).

### VARIATIONS IN GEOMORPHIC FORMS AND PROCESSES

The geologic complexity and youthfulness of the landscape are reflected in the variety of hillslopes and channels. Lithology and the degree of fracturing of the bedrock control local erosion rates, erosional landforms, and channel morphology (Janda, 1979).

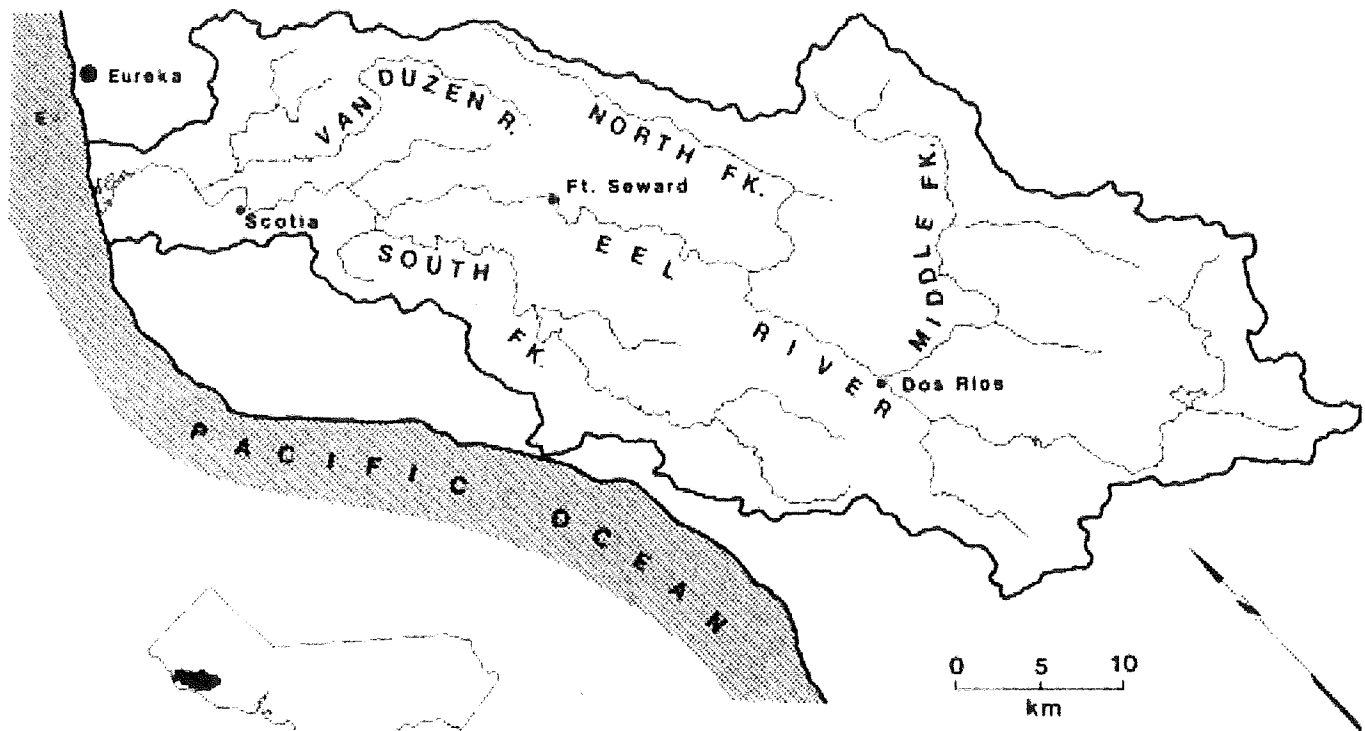


Figure 24 Map of the Eel River basin.

### *Mélange terrain*

Highly fractured *mélange* units in the middle reaches of the Eel and Van Duzen basins contain abundant streamside slumps and earthflows that directly contribute large volumes of sediment to channels (Brown and Ritter, 1971; Kelsey, 1980). Estimated average annual sediment yield from a stream draining an earthflow is 24,000 t/km<sup>2</sup> (Kelsey, 1980)—about ten times that for the Eel basin as a whole. Sixty-eight percent of the suspended sediment discharge of the Eel River upstream of Scotia comes from 36 percent of the basin—the reach between Dos Rios and the junction with the South Fork (Fig. 24) — which contains the greatest areas of *mélange*, earthflows, and streamside slides (Brown and Ritter, 1971).

Most of the sediment from *mélange* terrain is sand or finer material eroded from toes of earthflows (Nolan and Janda, 1989) and from gullies cut on steep and disrupted hillslopes (Kelsey, 1980). However, earthflows that impinge on channels can contribute blocks of exotic material as large as 10 m and more in diameter and create extremely narrow, steep, coarse channels. These constrictions have led to the formation of depositional reaches upstream that have wide, alluvial channels and gentler streamside slopes. The alternation of these contrasting reaches produces large-scale steps in longitudinal channel profiles (Kelsey, 1980).

### *Competent terrain*

Areas of more competent, graywacke sandstone are generally forested, have lower mass transport rates than *mélange* ter-

rain, and contain "V"-shaped valleys with steep straight hillslopes. Debris slides and avalanches are the predominant sediment sources. These contribute abundant coarse material to channels, but maximum particle size is smaller than that from earthflows. Stream gradients are not unusually steep, and most coarse material entering from hillslopes can be transported downstream during annual floods. Average annual sediment yield from stable forested basins is estimated at 300 t/km<sup>2</sup> (Janda and Nolan, 1979; Kelsey, 1980)—only about one-tenth of the average for the Eel basin.

### *Effect of land use*

Although soils are generally permeable and stable on slopes less than 30° (Brown and Ritter, 1971), disturbance of the ground cover can greatly accelerate surface and mass erosion in both stable and unstable areas. Despite the low population density, large areas of the basin are affected by grazing, timber harvesting, or associated road construction. Loss of tree-root strength in uncohesive soils (Ziemer, 1981) has probably helped to destabilize clearcut hillslopes; grazing and the replacement of native perennial grasses by European annuals with shallower roots has probably increased gully erosion of grasslands (Kelsey, 1980). Anderson (1970) estimated that intensive timber harvesting and associated road building from about 1950 to 1975 increased sediment yields several fold. Nolan and Janda (1981) measured a 10-fold increase in suspended-sediment discharge from tractor-yarded clearcuts in tributaries of Redwood Creek. The coincidence of concentrated timber harvesting and a series of large floods, how-

... makes it difficult to separate the effects of these two impacts on erosion and sediment yield (Harden and others, 1978; Kelsey, 1980).

### EFFECTIVENESS OF LARGE FLOODS IN SHAPING THE LANDSCAPE

Several authors have concluded that high-magnitude, infrequent floods have a greater impact on the landscape relative to smaller floods in northwestern California than in other areas (Janda and Nolan, 1979; Kelsey, 1980; Lisle, 1981; Nolan and Marron, 1985). During the flood of December 1964, rainfall recorded at more than 550 mm during 48 hr in some locations produced stages in the Eel River 2 to 5 m above previous records (Waananen and others, 1971; Brown and Ritter, 1971). Peak flood discharge of the Eel River near its mouth was  $26,500 \text{ m}^3 \text{sec}^{-1}$ , corresponding to runoff rates of  $2.82 \text{ m}^3 \text{sec}^{-1} \text{km}^{-2}$ . This flood ranks among some of the world's great recorded floods for a basin of this size (Wolman and Gerson, 1978). Kelsey (1980) estimated the recurrence interval of the 1964 flood in the Van Duzen River, a major tributary, at approximately 100 yr. The flood caused profound changes in sediment transport rates and long-lasting changes in hillslopes and channels. Some morphologic changes persist today.

#### *Sediment transport by large floods*

Large, infrequent flows transport a relatively large proportion of sediment in the Eel River. At three gaging stations in the basin, discharges below which 90 percent of the suspended sediment load is carried have recurrence intervals between 3 and 16 years (Nolan and others, 1987). At these stations, the proportion of sediment carried by discharges of given frequencies increases with decreasing frequency of discharge and reaches a node at moderate frequencies (recurrence interval of 1.2 to 1.6 yr), as observed in other regions. The proportion remains high for infrequent discharges at the Van Duzen station, however, and increases again with further decrease in discharge frequency at the Fort Seward and Black Butte River stations. At Black Butte River, a major tributary upstream of Dos Rios, the greatest proportion of load has been transported by the most infrequent discharges.

During the 1964 flood, 105 million tonnes of suspended sediment were transported past Scotia during a 3-day period, compared to 85 million tonnes transported during the previous 8 years (Brown and Ritter, 1971). The flood accounted for 7 percent of the total sediment discharge of the Van Duzen River during a 35-yr period, and mobilized as much bed load as moves out of the basin in a century (Kelsey, 1980). Suspended-sediment concentrations at a given discharge increased several-fold and remained high for 2 to 5 years after the flood (Anderson, 1970; Knott, 1971).

### *Effects on channels and hillslopes*

One reason why large floods are so important in shaping stream channels in the Coast Range is that material mobilized from landslides during large storms is commonly carried directly to stream channels instead of to lower hillslope sites or valley flats. Air photos of the basin taken before and after the 1964 flood (Fig. 25) show increased incidence of new landslides and long reaches of greatly widened channels (Brown and Ritter, 1971; Kelsey, 1977). For instance, the length of stream banks affected by debris avalanches increased 423 percent in the upper portion of the Van Duzen basin and 119 percent in the lower portion (Kelsey, 1977). Voluminous coarse debris from debris avalanches and torrents led to widespread channel braiding, channel widening commonly more than 100 percent, and aggradation more than several meters in some reaches (Hickey, 1969; Brown and Ritter, 1971; Knott, 1971; Kelsey, 1977). In areas where landslides were voluminous, aggradation and channel-widening downstream caused additional streamside failures by erosion of supporting material at the base of hillslopes (Kelsey, 1977; Janda and Nolan, 1979).

In addition to widening, channels adjusted to the increased sediment load by reducing bar-pool bed topography and thereby reducing hydraulic friction (Lisle, 1982). As a result, velocity increased and depth decreased at a given discharge, signifying an increase in bed-load transport capacity (Knott, 1971; Lisle, 1982). These adjustments may have accelerated the flushing of excess material from the channel networks. Associated changes in aquatic habitat may have contributed substantially to the decline in populations of anadromous salmonids in the basin (California Department of Water Resources, 1974).

#### *Channel recovery*

The 1964 flood appears to have been effective in shaping stream channels of the Eel basin, according to Wolman and Gerson's (1978) criteria, because the changes have persisted in some reaches up to the present (Lisle, 1981; Kelsey and Savina, 1985). In some reaches, channel patterns and flood deposits along the higher margins of channels will be altered little until a flood of equal or greater magnitude recurs (Kelsey, 1977).

Channels have recovered in overlapping stages dependent on a sequence of processes. First, suspended-sediment concentrations declined to pre-flood levels within about 5 years. Second, as excess bed material has been transported downstream, channel beds have degraded to stable levels at or above pre-flood elevations over periods of a few years or longer, and some reaches may remain aggraded into the next century (Kelsey, 1980; Kelsey and Savina, 1985; Lisle, 1981). These periods depend apparently on the volume and coarseness of aggraded material, channel gradient, and distance from sediment source. During channel-bed degradation, hydraulic geometries have recovered to some degree

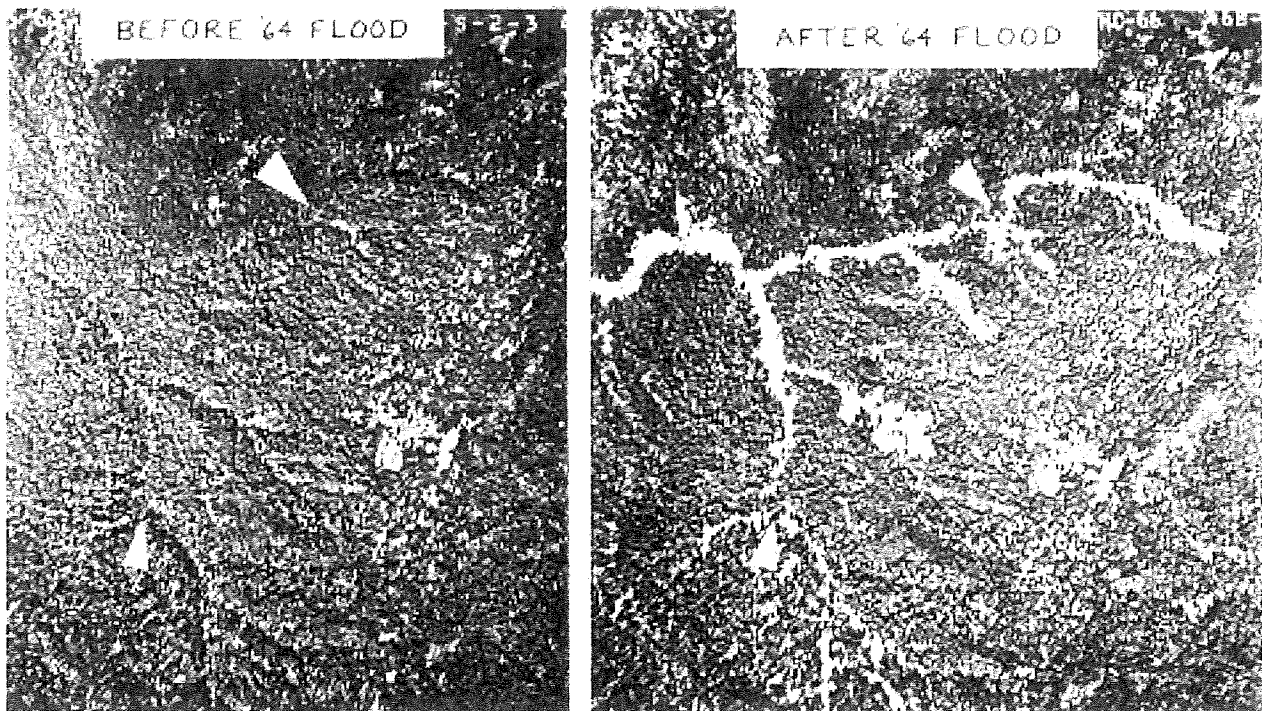


Figure 25. Aerial photographs taken in summers of 1963 and 1966 of the headwaters of the South Fork Van Duzen River, showing changes due to the 1964 flood. (From Kelsey, 1977, with permission). The white arrows identify the same channel reaches on both photos. Lighter areas in the 1966 photo were revegetated by debris avalanches, debris torrents, and widened, aggraded stream channels.

to pre-flood relations. The degree of recovery apparently depends on reestablishment of pre-flood channel widths (Lisle, 1982)—the third phase of channel recovery. Channels in alluvial reaches have incised into flood deposits, leaving a narrower channel bounded by sparsely vegetated flood deposits. Many tributary channels that are bounded on at least one bank by bedrock or colluvium have remained wide, however. Soil creep and dry ravel can be slow in replacing eroded banks, and new bank material is frequently scoured by high flows contained in narrow valley bottoms (Lisle, 1981). Riparian vegetation (primarily red alder and willow), which aids bank accretion along low-flow channel margins, is also subject to scour during high flows. Riparian trees are now well established along many reaches, however, due to the absence of large floods since 1975.

## CONCLUSIONS

Erosive bedrock, rapid uplift, high seasonal rainfall, and recent disturbance by man have produced exceptionally high sediment yields from the Eel River basin. Because channels are commonly bounded by hillslopes in narrow valleys, channel morphology and sedimentology are strongly influenced by adjacent hillslope processes, which vary with the lithology and degree of shearing of bedrock. Because of the close linkage between channel and hillslope processes and the occurrence of high runoff events, large floods produce and transport a large proportion of fluvial sediment and cause widespread, persistent changes in

channels. Subsequent remolding of channels by smaller discharges proceeds with the transport of excess sediment out of channels and the reconstruction of streambanks. These sequences of channel recovery can require as long as several decades.