

Stream
Reaches
Surveyed
For Hazard
Analysis

10/2008

BAER

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DS3

DS1

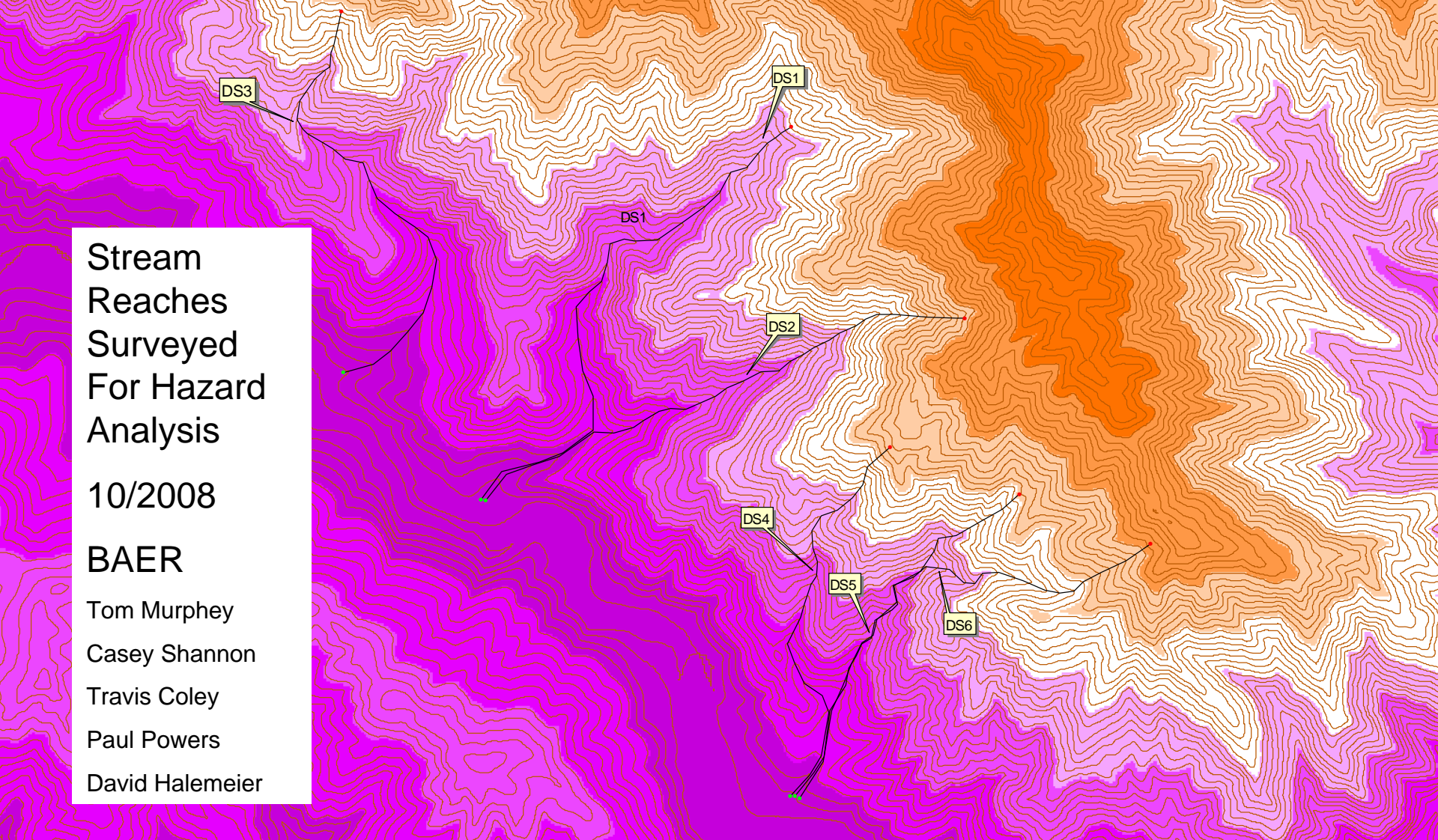
DS1

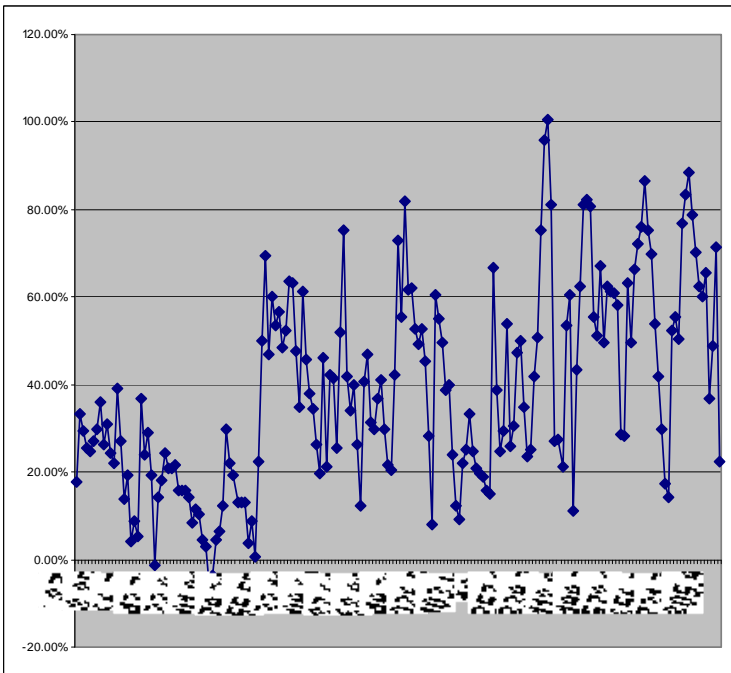
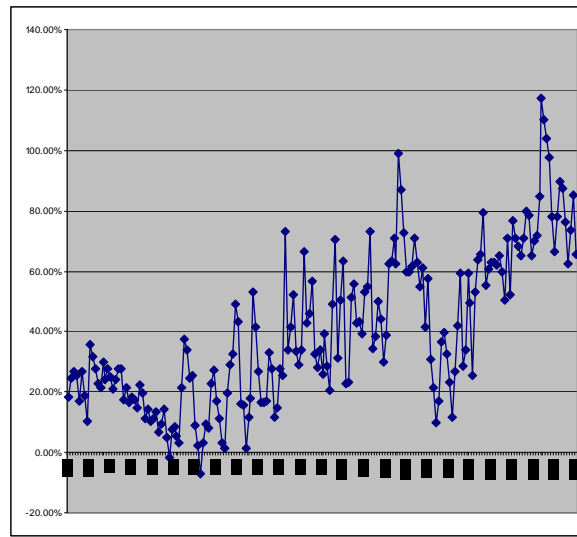
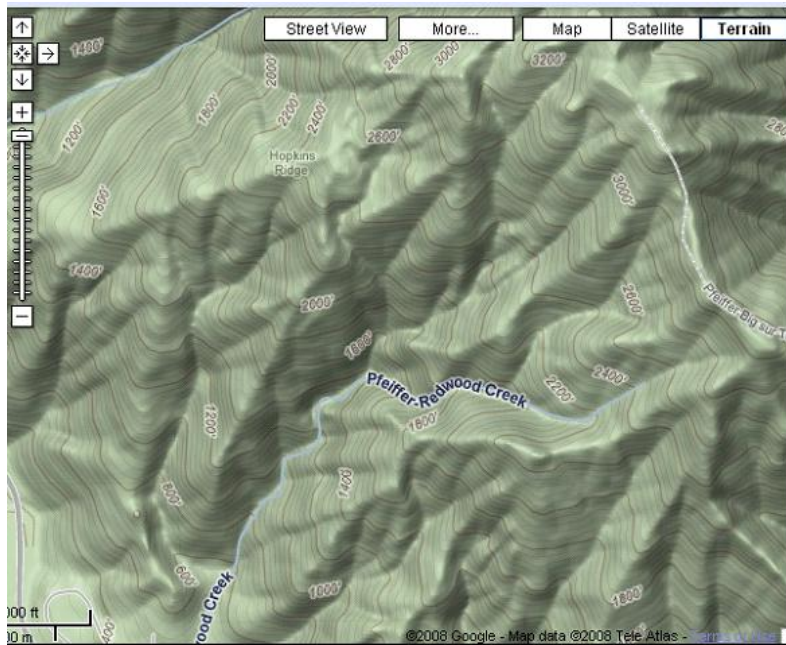
DS2

DS4

DS5

DS6





Stream Segment: 90 % erosional; 5% depositional; 5% transitional

Stream Azimuth Effects: Deposition occurs at all confluences. Small in size depending upon wood load. All confluence >60 degrees

Stream Gradient: Using 2x valley width , gradient ranges from 15 to 30%. Within falls areas gradient exceed 90%

Valley Character: Very young with steep 80-150 % gradient side slopes containing an extreme sediment load from downslope migration of material highly unstable due to volume of dry ravel. Slopes contain shallow soils at peaks and ridges due to gradient and weathered material. Deeper soils are found at base of hillslope in colluvial deposits. Vegetation corresponds to soils depth. Grass, shrub dominated peaks and ridges with trees being found in base slopes and valley bottoms.

Width; 10-40'

Tree type/size: Redwood overstory 10 – 100 inches with predominate size class being 40-70 " class. Ca. Laurel, Sycamore, Tan oak and shrub species found in the understory. Forest Service land contains grass/ shrub species on upper slopes.

Substrate condition: > 90 % embedded, with 10% boulder; 30% gravels/sands; 10% cobble; 10% small boulder; 40 bedrock. All angular and mobile at high flows (> 10 year flow).

Potential sediment sources: Upslope ravel.

Potential wood for anchoring: Wood availability low < 1piece per 100 feet in surveyed reach due to character of falls

Access: Foot travel is dangerous due to steepness of side slopes. Access through trail to Pfeiffer Falls and then cross country up slope. Loose material makes travel hazardous.

Safety factors: High risk due to sideslopes, stream gradient, and availability of rock raveling down side slopes.

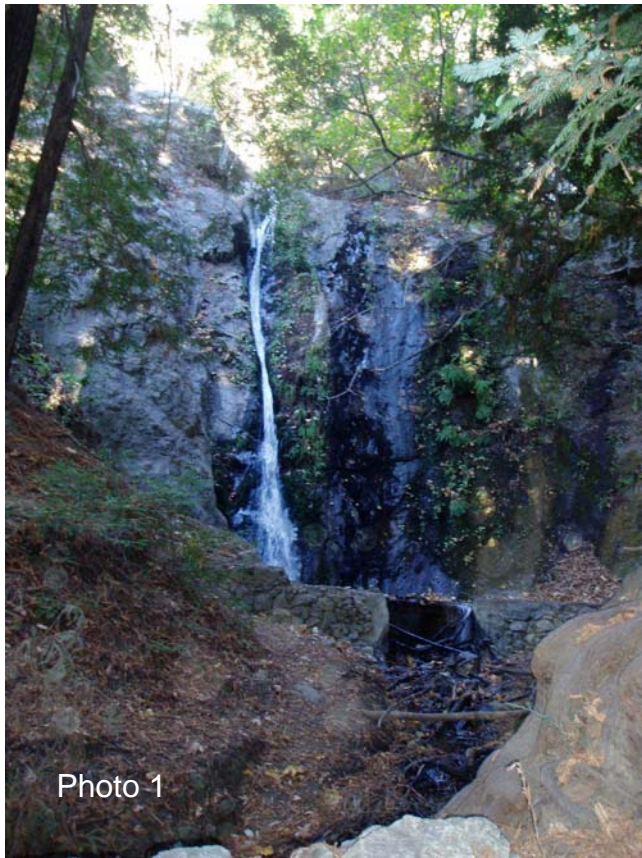


Photo 1

Photo 1: Pfeifer Falls. Found on State Park lands below Forest Service Boundary.

Channel area at Forest boundary. Large redwood in foreground spanning channel. This small 100 foot bench is found between two 40 foot falls.



Photo 2

Photo 3: Steep gradient > 75%, entering channel. Slopes contain approximately 4-10" of ravel material covered with leaf litter.



Photo 3

Photo 4: Channel bottom and valley width. Note ravel covering channel bottom material. Flow goes subsurface.

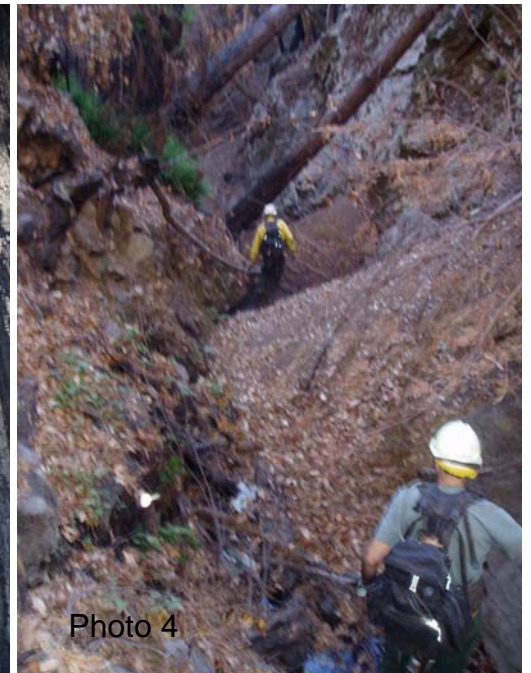


Photo 4



Photo 5

Photo 5: Large piece of redwood effectively storing ravel material behind, upslope.



Photo 6

Photo 6: Downed wood partially consumed by fire and example of concentration of wood available. Minor amounts.



Photo 7

Photo 7: Different angle of photo 4, Note pinch point where ravel from both sides have pinched channel off and buried substrate. Ravel extend upslope >100 feet. Facing downstream.



Photo 8

Photo 8: 3rd in a series of falls approximately 50 feet high. On Forest Service land. Looking over falls downstream.

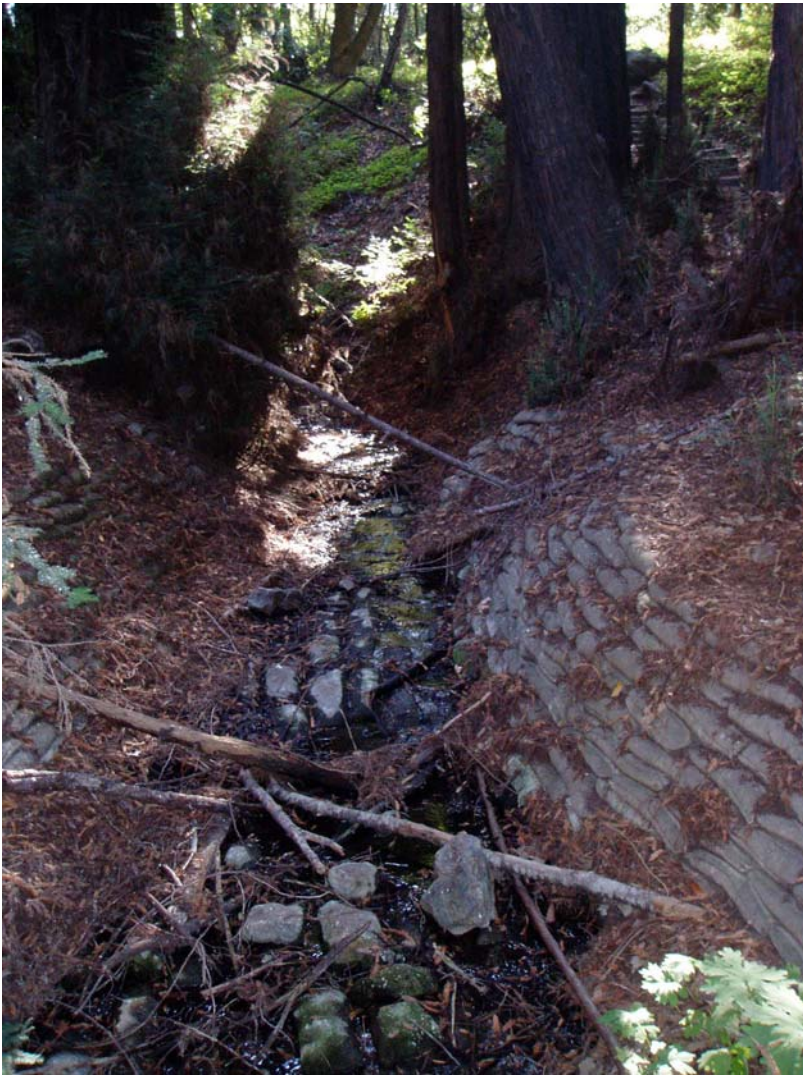


Photo 9: Within the State park channel facing upstream of a culvert. Channel has channel hardened and will create increased energy due to lack of structure and constraints.

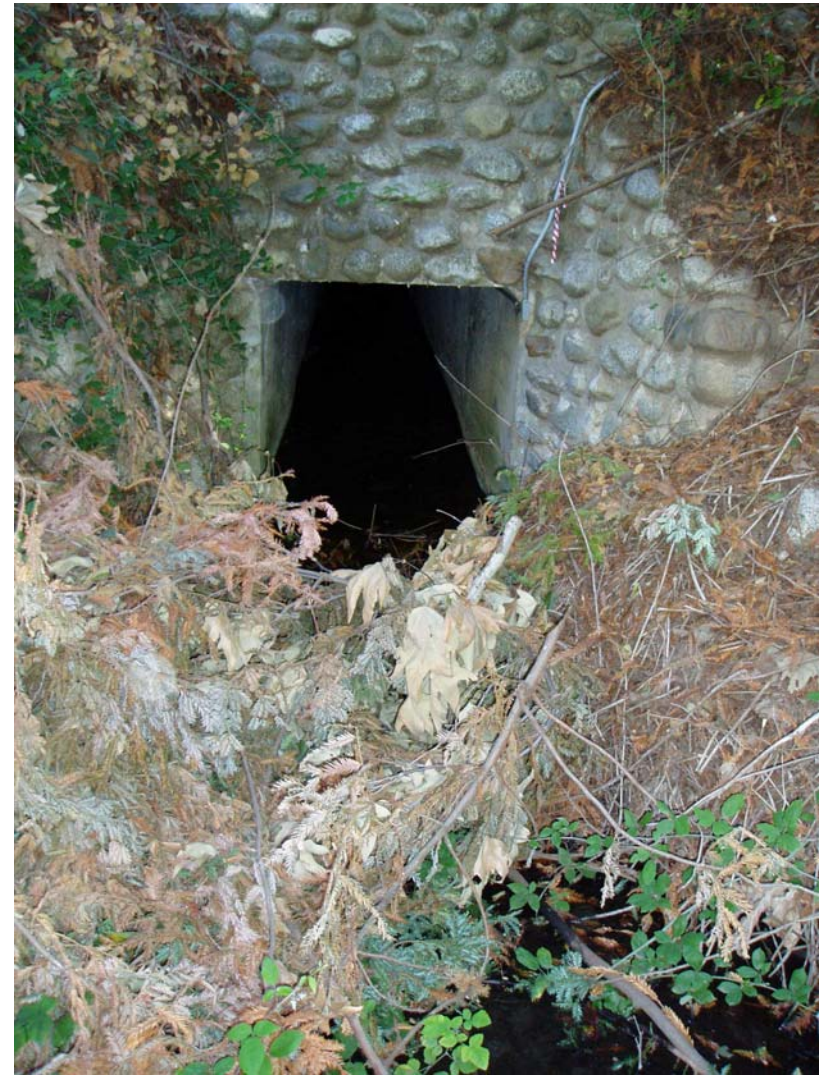


Photo 10: Small box culvert drains channel and is not capable of passing bedload or flow given a > 10 year event with upslope conditions.

NOTE: Entire State Park facility is located on a alluvial outwash deposit from historic past failures. Historic and current efforts set the stream channel up to not allow energy regulation through utilization of historic flood prone area. Wood has been removed and channels hardened which allow increase in stream energy as one travels down slope. To minimize effects of failures upslope efforts should be taken to reduce energy by adding complexity in the channel and pushing flow out onto its historic flood plain. This flood prone area is off Forest Service land and on State and Private Lands.