

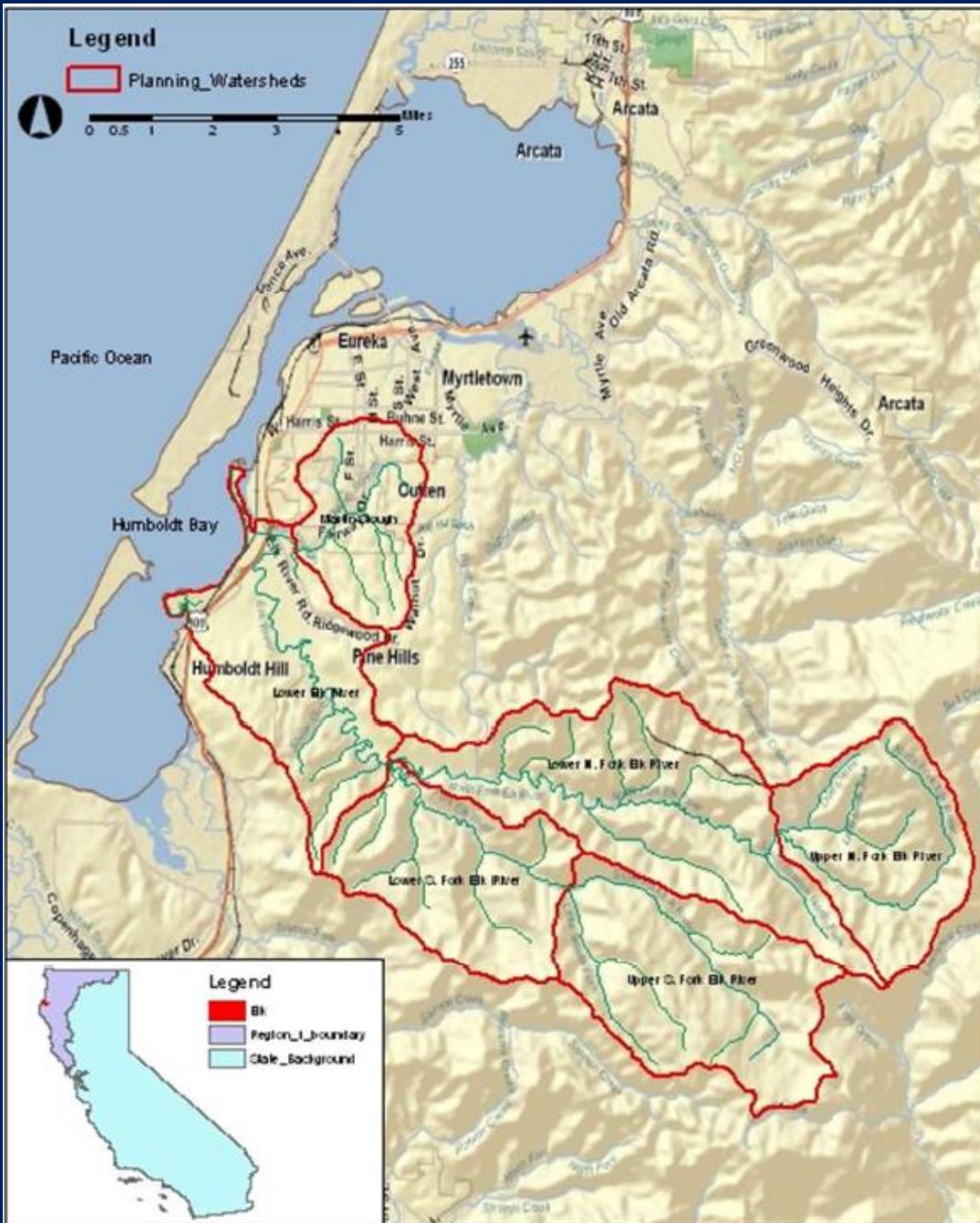
**Elk River Sensitive Watershed
Nomination:
A Brief History Lesson**

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California Department of Forestry and
Fire Protection
November 4, 2014**



Outline

- **Background information**
- **Sensitive watershed nomination**
- **Reasons why no action was taken by the BOF**
- **Conclusions**



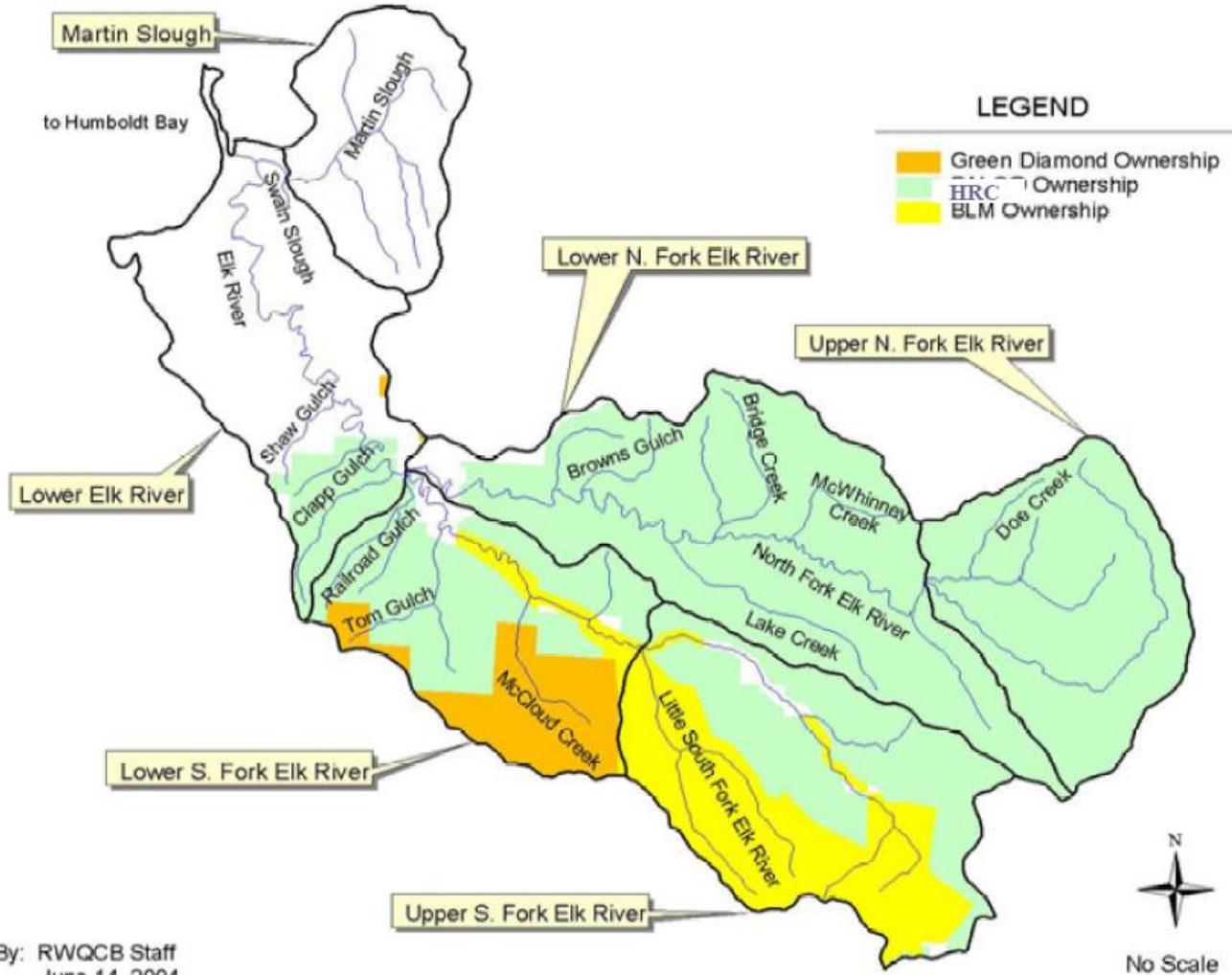
**35,000 ac
Drainage Area**

**Elk River drains
into Humboldt
Bay near Eureka,
CA**

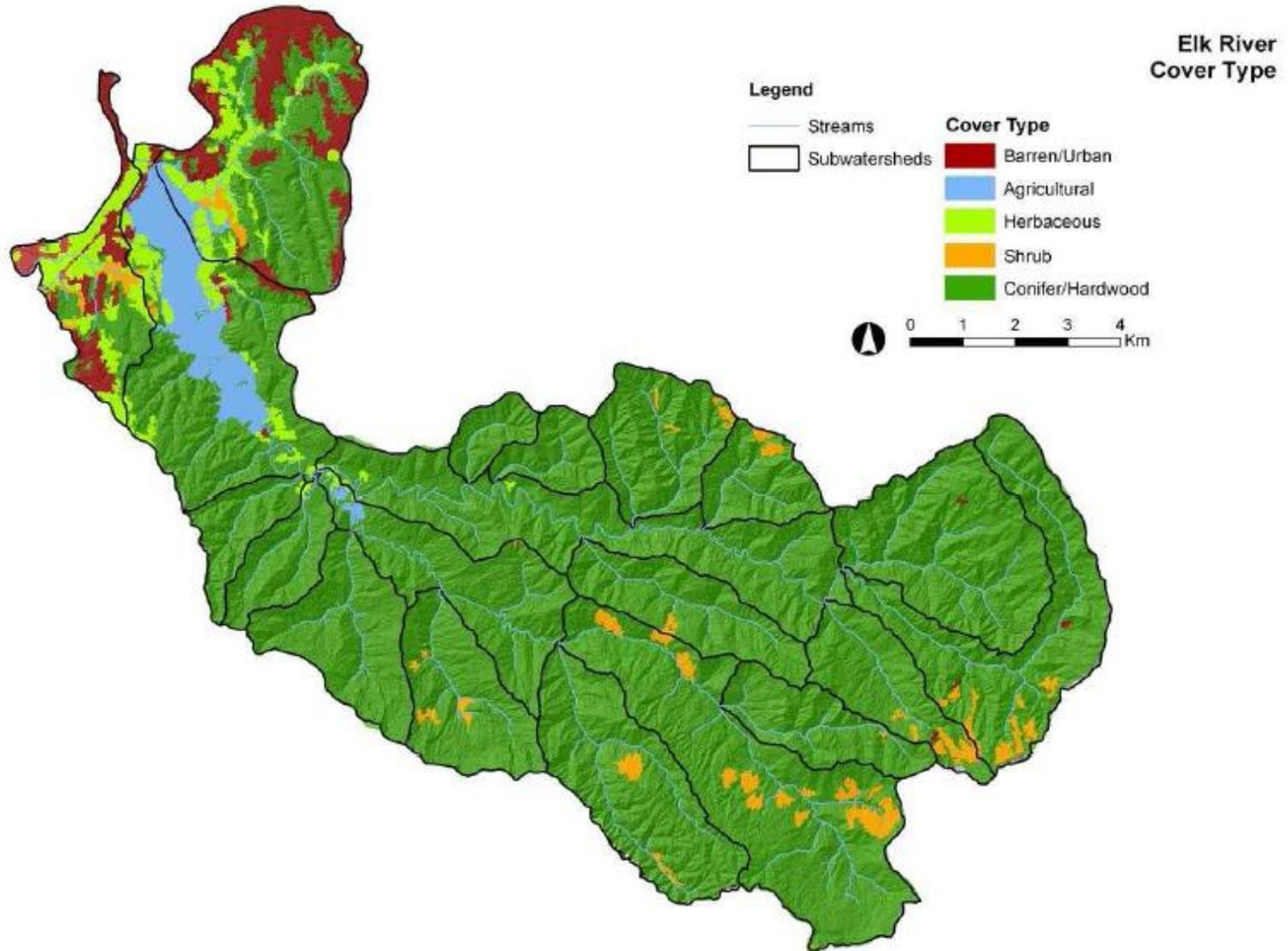
**It was mainly
owned by PALCO
until 2008; now
mostly owned by
**Humboldt
Redwood
Company****

Elk River TMDL

Elk River Watershed Land Ownership



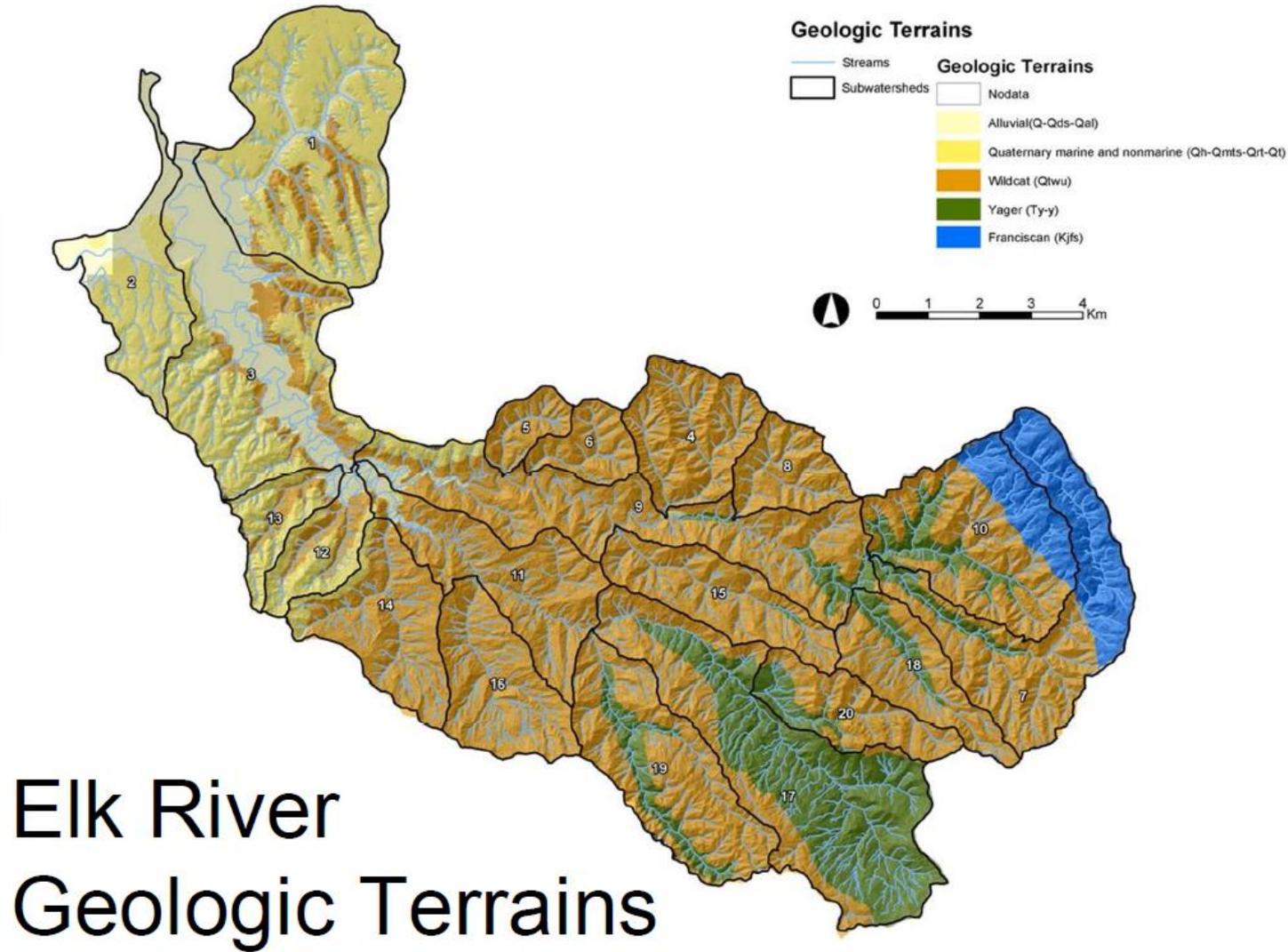
Elk River Watershed Cover Type



Second Growth
Redwood Forest



Photo: D. Kuszmar,
NCRWQCB



Elk River Geologic Terrains

Bridge Creek Landslide Feature



Photo: D. Kuszmar, NCRWQCB

**Berta Road, Lower Elk
River, December 2005--
Winter travel is difficult**





**Lower Elk
River
Winter 2004**



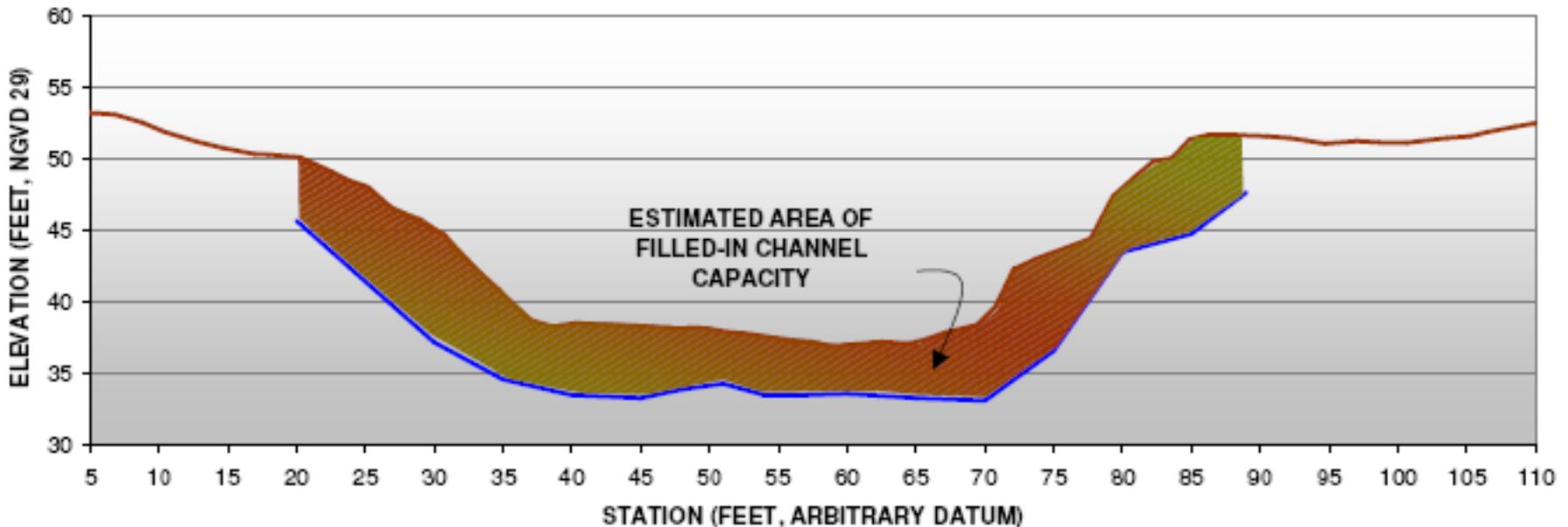
“Red House” built in the floodplain—
frequently flooded

Diminished Channel Capacity Lower Elk River WY 1965 to WY 2003 (Patenaude 2004)

Cross Sectional Area (ft ²)	Year
1158	1965
758	2003

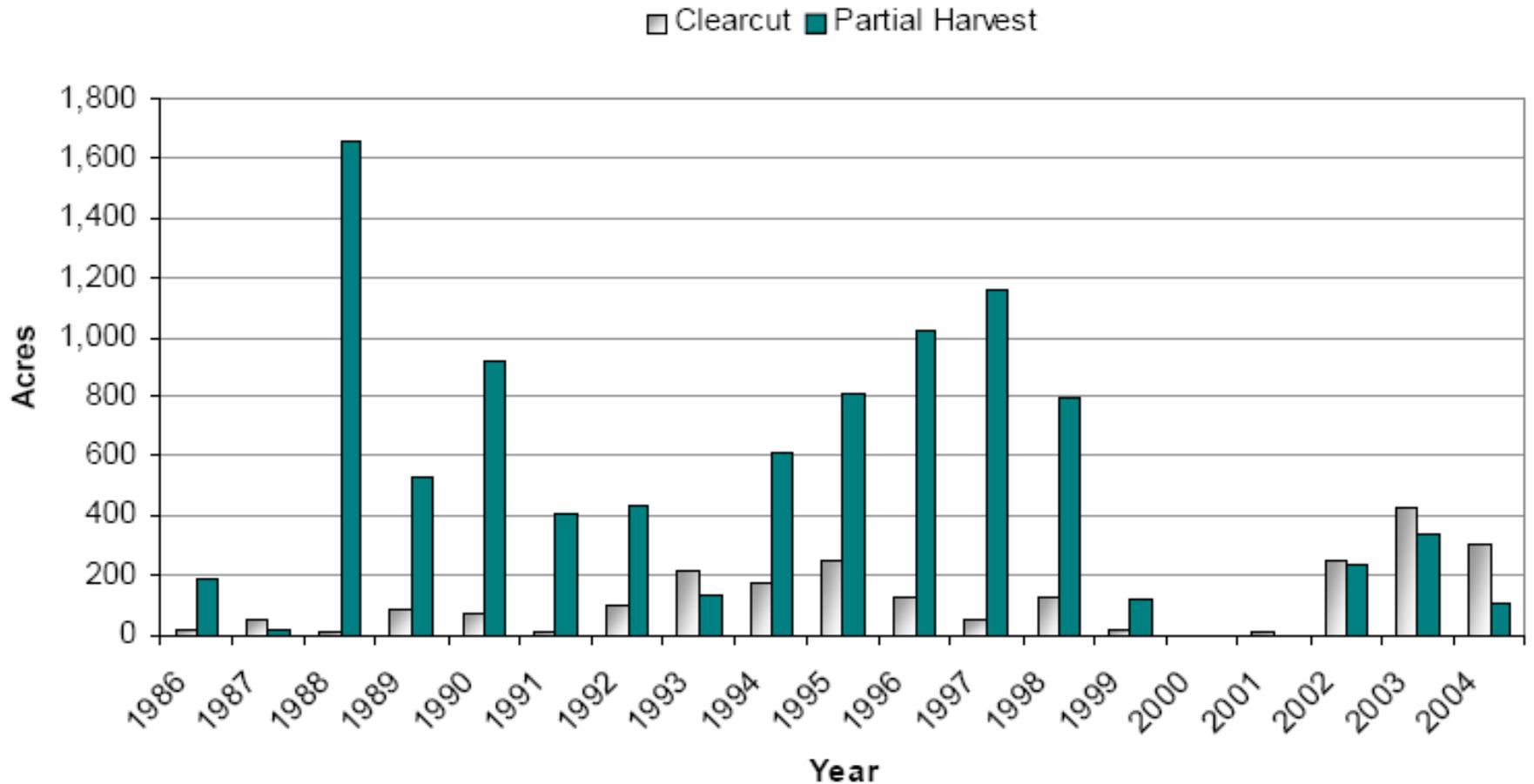
Channel capacity as a function of cross-sectional area has decreased by 35%--6 to 9 ft of fine sediment filling

— 23-DEC-64
— 16-JUN-03



Accelerated Harvesting Rates in the 1990's

A.) N. Fork Elk River Harvest History



Estimated Sediment Delivery

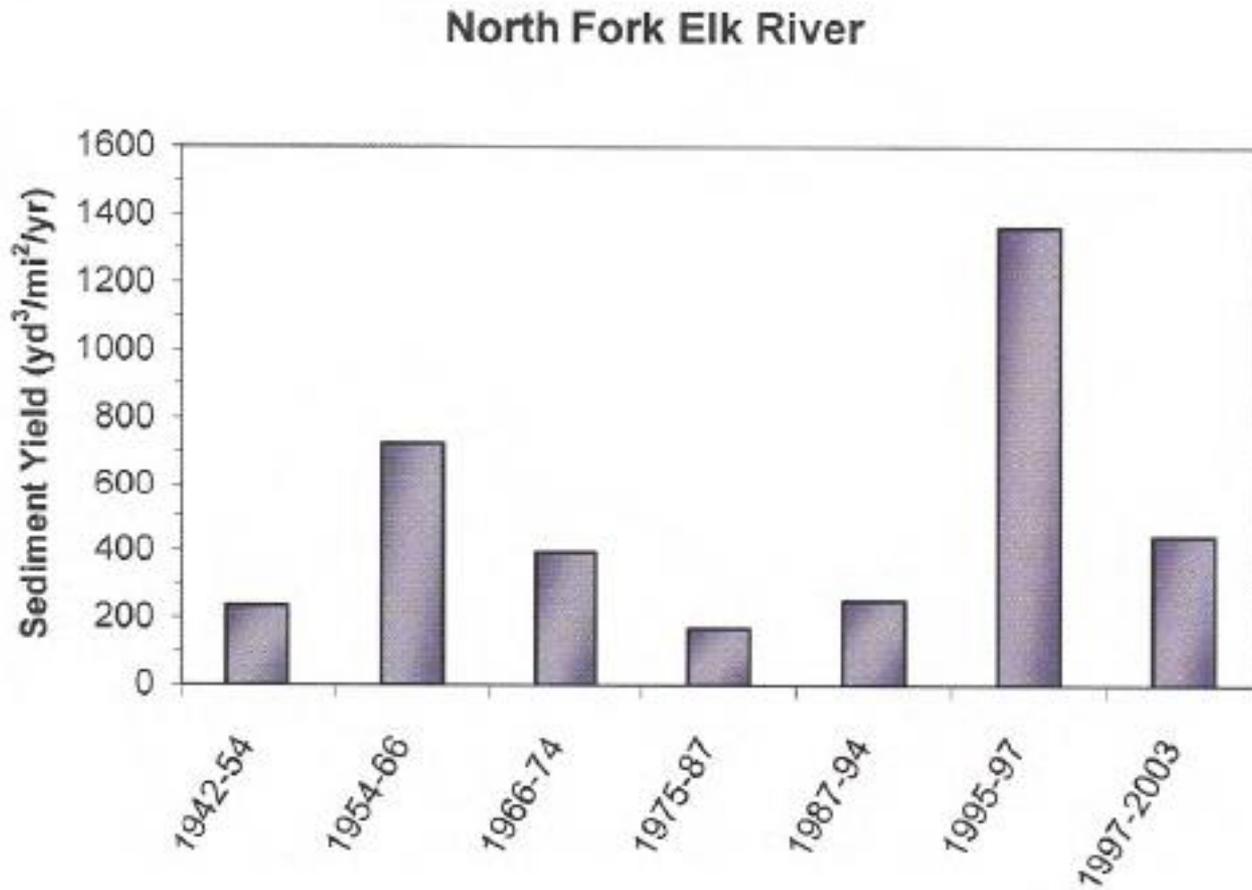


Image: PALCO 2004 ROWD

Early History

- The sensitive watershed rule package was developed in the early 1990's, with the goal of preventing 303(d) listings from occurring.
- Elk River watershed, along with Freshwater, Bear, Jordan, and Stitz Creeks, were stated as having cumulative watershed impacts by the Review Team agencies in 1997.
- NCRWQCB listed Elk River as impaired under Sec. 303(d) of CWA, requiring a TMDL, in 1998.
- 2000-2001: CDF (now CAL FIRE) had a functional moratorium on approval of new THPs until watershed analysis was completed.
 - Memorandum sent to PALCO on May 11, 2000 asking for information necessary for evaluating the potential impact of new timber operations in Elk River and Freshwater Creek basin on flooding.
- CDF (now CAL FIRE) set an interim limit on annual harvest rate prior to completion of watershed analysis to address the flooding issue (2002).

CDF Short-Term Solution

- In 2002, CDF imposed 600 clearcut equivalent acres/yr limit to address peak flows and flooding (public health and safety issue).
 - John Munn used the North Fork Caspar Creek equation for peak flows (Lewis et al. 2001).
 - Factors considered in this approach are limited to canopy removal, watershed wetness, flow return periods, and number of years since harvest.
 - Canopy removal rates of up to 600 acres per year were not to result in an increase in peak flows over current conditions in the short term.
 - This was called an interim solution prior to watershed analysis work, required by the HCP.
 - Elk River and Salmon Creek watershed analysis prepared by Hart Crowser for PALCO in 2005.

Sensitive Watershed Petition

- **NCRWQCB submitted Elk River a sensitive watershed nomination petition for the Elk River watershed to BOF (June 18, 2003).**
 - The NCRWQCB's nomination was part of a multi-faceted effort, including TMDL development, WWDR development, and renewed interagency coordination.
- **The nomination request was made because the NCRWQCB was considering a harvest rate limitation in the WWDR, and that was an area of cross-over with CDF (now CAL FIRE) and the BOF.**
- **The Sensitive Watershed Nomination was prompted by petitions submitted by the Humboldt Watershed Council.**
- **The Elk River Sensitive Watershed Nomination Review Committee was formed by the BOF.**

Elk River Sensitive Watershed Nomination Review Committee

Committee Members (voting)

- Dr. Kate Sullivan, PALCO
- Dr. Bill Weaver, PWA
- Dr. Dale Thornburg, HSU
- Jim Able, consultant
- Richard Gienger,
HWC/SSRC
- Eugene Senestraro, rancher

Advisory Members

- Dr. Tom Lisle, USFS PSW
- Joe Fassler, CDF
- Gordon Leppig, DFG
- Dave Fuller, BLM
- John Clancy, NMFS
- Dave Parson, NCRWQCB
- Martha Spencer, Humboldt
Co. Community Services
- Tom Spittler, CGS
- Pete Cafferata, CDF

September 13, 2004 BOF Memorandum

Clarifies authorities and responsibilities of Elk River Sensitive Watershed Nomination Review Committee:

- 1. Screen for compliance with 14 CCR § 916.8 (a).**
- 2. Determine resources at risk.**
- 3. Evaluate adequacy of existing Forest Practice Rules and what is needed above the rules.**
- 4. Recommendations.**

“It is the function of the committee during this phase to determine if the Forest Practice Rules (**and the process/review incorporated by the rules which includes HCPs, WQ waivers and WDRs, ITPs, etc.**) do not sufficiently address measures to protect the specific resource(s) at risk. Such a finding would result in a determination by the committee that the watershed is sensitive.”

May 10, 2005 Meeting

- **2nd to last full meeting held—David Kuszmar described the watershed-wide WDR (WWDR) being developed for the Elk River watershed.**
 - **WWDRs in the Elk River basin were being developed to permit THP-related discharges of waste such that recovery from cumulative effects is not impeded.**
 - **Specifically, Water Board staff was approaching this problem by placing effluent limits on: (1) increases in peak flows from recently harvested areas, and (2) limits on sediment delivered from harvest-related landslides.**

Next Steps

- Following Mr. Kuszmar's presentation on May 10, 2005, Mr. Gentry asked the voting members of the committee present if they now believe that the nomination package is in compliance with 14 CCR § 916.8 of the Forest Practice Rules.
- Mr. Able, Mr. Gienger, Dr. Thornburg, and Mr. Senestraro all stated that they now believed that the nomination package was in compliance with 14 CCR § 916.8.
- Mr. Gentry reminded the group that there are **three steps** to the process, only one of which has now been completed:
 - Did the Water Board submit the information required by § 916.8?
 - If yes, is the watershed nominated sensitive?
 - If sensitive, what modifications of the Forest Practice Rules/review process are required?
- Mr. Gentry stated that the Board of Forestry and Fire Protection is the final arbitrator for what happens regarding sensitive watershed rules for Elk River, and that **approaches other than special rules can be considered** (i.e., all the regulatory layers that currently are or will be shortly in place for this watershed).
- Mr. Gentry stated **performance-based standards** could be part of a solution and that Porter-Cologne fully embraces such an approach.

Performance-Based Approach

- At the Elk River Sensitive Watershed Nomination subcommittee meeting held on June 10, 2005, Dr. Kate Sullivan, PALCO stated that PALCO would develop a *performance-based approach that sets effluent limits for the Elk River watershed.*
 - The effluent limit concept was described as not using a single numeric target, but rather having a suite of values for annual sediment load that depend on precipitation, tectonic activity, etc.
 - There would have to be agreement amongst the committee members that the effluent limits set were appropriate based on the best available science-derived data.
 - A concept paper from Dr. Sullivan was required to proceed with this performance standard approach.
 - Dr. Sullivan was to write a description of the effluent limit derivation approach and email it to the subcommittee (**never completed; never got final clearance from PALCO senior staff**).
 - July 6, 2005 committee meeting (last): Following the development of a combined performance standards document, a date for the next meeting was to be determined (never held).
 - A list of performance standards for the Elk River watershed was to be submitted by July 22, 2005.

Why no Action was Taken by BOF

- No action taken by BOF after seven Sensitive Watershed meetings and one sub-committee meeting held in 2004-2005. Why?
 - Without the performance-based approach, along with the Water Board's WWDR, the BOF felt there was no point in continuing the Elk River Sensitive Watershed effort.

NCRWQCB's Watershed-Wide WDR

- **NCRWQCB required a “Watershed-Wide” Waste Discharge Requirement permit for Elk River watershed, addressing rate of timber operations to control harvest-related landslides and peak flows.**
 - WWDR adopted in 2006 - interim limit on harvesting in Elk River prior to completion of TMDL work.
 - HRC limited to 114 ac/yr for SF Elk and up to 266 hazard adjusted ac/yr NF Elk River (2006 WWDR).
 - NCRWQCB instructed staff to expedite work on the TMDL.
- **TMDL development continues in 2014.**
 - Elk River Peer Review Draft Staff Report to Support the Technical TMDL (2013).

Conclusions—Lessons Learned

- In the case of the Elk River watershed, approaches other than special rules could be used to address cumulative watershed effects.
- Performance-based standards for watershed outputs are a worthy goal but may be difficult to implement in potentially sensitive watersheds.



NF Elk River watershed, unit logged in 2005 (Incline THP)