

MEMORANDUM OF UNDERSTANDING
Between the
UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE, PACIFIC SOUTHWEST RESEARCH STATION
and the
STATE OF CALIFORNIA, CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF FORESTRY AND FIRE PROTECTION

This Memorandum of Understanding is made and entered into between the United States Department of Agriculture, Forest Service, Pacific Southwest Research Station, hereinafter referred to as the PSW, and the State of California, California Natural Resources Agency, Department of Forestry and Fire Protection, hereinafter referred to as the State, to establish a long-term research philosophy between the State and the PSW for the Caspar Creek Watershed Study.

I. PURPOSE AND STATEMENT OF MUTUAL INTEREST AND MUTUAL BENEFITS

For over fifty years, a comprehensive and cooperative watershed study has been conducted in the Caspar Creek drainage on Jackson Demonstration State Forest near Fort Bragg. The first phase was a paired watershed study that began in 1962 with the objective of documenting hydrologic changes, erosional impacts, and sediment production resulting from road construction in 1967 and selective tractor logging in 1971 through 1973 in the South Fork. The second phase was initiated in the early 1980's with the principal objective to investigate potential cumulative watershed effects resulting from even-age (clear-cut) silvicultural activities using cable yarding techniques in the North Fork. Auxiliary studies were designed to evaluate various flow routing and sediment transport processes, water quality, fisheries and other biological community (algal and benthic macro invertebrates) responses. Currently, a third phase experiment is under development for the South Fork. This project will quantify the influence of multi-aged silvicultural systems on physical, chemical, and biological watershed processes.

The 53-year hydrologic record at the North Fork and South Fork of Caspar Creek is unique in the world. There are only three other locations in the United States with similar long-term continuous streamflow records from forested small (<2000 acres) watersheds: Coweetá in North Carolina, Hubbard Brook in New Hampshire, and H.J. Andrews in Oregon. Of these locations, the Caspar Creek data represent the only long-term hydrologic information from watersheds located in second-growth conifer forests. In addition, Caspar Creek is the only location having a rain-dominated winter and xeric summer climate. Because of its long record and unique conditions, information from Caspar Creek will continue to be valuable to both the research and the land management communities.

II. THE PARTIES AGREE:

The State (Jackson Demonstration State Forest and Sacramento Headquarters) and the PSW (Redwood Sciences Laboratory and Albany Headquarters) agree in principle to a long-term philosophy for cooperation at Caspar Creek. This MOU between the State and the PSW was first signed in 1999. It is understood that any agreement is subject to changing budget and political climates, but these two agencies will endeavor to:

- 1) continue to measure streamflow at the North and South Fork weirs through 2099 -- regardless of whatever future land management occurs upstream. Such long term monitoring will be priceless to future generations and can be accomplished with little cost;
- 2) continue to measure rainfall at the S620 and N408 sites and maintain appropriate gauge "exposure";
- 3) maintain the 96-acre subwatershed HEN and the 51-acre subwatershed IVE as untreated controls through 2099 and continue to measure stormflow at these gaging stations;
- 4) continue to measure suspended sediment (load or turbidity) at the North and South Fork weirs and at the HEN and IVE gaging stations; and
- 5) maintain the 2.5 acre MI swale as an untreated control to allow for periodic comparisons of pipeflow, subsurface hydrology, and related hydrologic processes with treated headwater swales.

III. IT IS MUTUALLY AGREED AND UNDERSTOOD BY AND BETWEEN THE PARTIES THAT:

- 1) This instrument is neither a fiscal nor a funds obligation document. Any endeavor or transfer of anything of value involving reimbursement or contribution of funds between the parties to this instrument will be handled in accordance with applicable laws, regulations, and procedures including those for Government procurement and printing. Such endeavors will be outlined in separate agreements that shall be made in writing by representatives of the parties and shall be independently authorized by appropriate statutory authority. This instrument does not provide such authority. Specifically, this instrument does not establish authority for noncompetitive award to the cooperater of any contract or other agreement. Any contract or agreement for training or other services must fully comply with all applicable requirements for competition.
- 2) Each agency shall be acknowledged in publications and audiovisuals.
- 3) This instrument in no way restricts the PSW or the State from participating in similar activities with other public or private agencies, organizations, and individuals.
- 4) This instrument is executed as of the last date shown below and expires 5 years from the execution date, at which time it will be subject to review, renewal, or expiration.
- 5) Either party, in writing, may terminate the instrument in whole, or in part, at any time before the date of expiration.
- 6) Modifications within the scope of this instrument shall be made by the issuance of a bilaterally executed modification prior to any changes being performed.
- 7) The principal contacts for this instrument are:

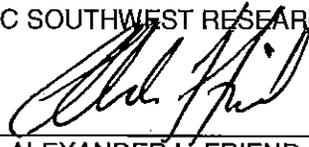
Peter H. Cafferata Watershed Protection Program Manager Department of Forestry and and Fire Protection P.O. Box 944246 Sacramento, CA 94244-2460 916-653-9455	Leslie M. Reid Pacific Southwest Research Station at Arcata USDA Forest Service 1700 Bayview Drive Arcata, CA 95521 707-825-2933
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- 8) Any information furnished to the Forest Service under this instrument is subject to the Freedom of Information Act (5 U.S.C. 552).
- 9) The respective agencies will handle their own activities and utilize their own resources, including the expenditure of their own funds, in pursuing the objectives of the MOU. Each party will carry out its separate activities in a coordinated and mutually beneficial manner.
- 10) This MOU is not intended to, and does not create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity, by a party against the United States, its agencies, its officers, or any person.

IN WITNESS WHEREOF, the parties hereto have executed this Memorandum as of the last date written below.

STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF FORESTRY
AND FIRE PROTECTION

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
PACIFIC SOUTHWEST RESEARCH STATION

By 
KEN PIMLOTT
Director

By 
ALEXANDER L. FRIEND
Station Director

Date 9/3/15

Date 28 OCT 2015