

1 I, William Russell, declare as follows:

2 1. I am Associate Professor of Environmental Studies at San Jose State University. I
3 have a Ph.D from the Department of Environmental Science Policy and Management,
4 University of California, Berkeley. My research primarily focuses on the conservation
5 and restoration of forest communities, with particular interest in the direct and indirect
6 effects of logging on coastal redwood forests, including riparian (flood-prone) redwoods.

7 2. Mature redwood forest-associated understory plant species have been shown to be
8 severely impacted by logging. My research has demonstrated that the recovery of mature
9 redwood forest floor herbaceous plant populations after substantial logging disturbances
10 is a very slow ecological process that often lags behind the recovery of the redwood
11 forest structure itself. My research has shown that logging disturbance of redwood forests
12 by thinning (selective felling individual redwoods by mechanical methods) is likely to
13 impact sensitive understory herbaceous species that are dependent on the moist, shady
14 environment provided by a mature forest canopy. Riparian redwood logging disturbances
15 are positively related to invasion of weedy, non-native vegetation that is detrimental to
16 recovery of native riparian redwood understory vegetation.

17 3. Logging disturbances caused by the proposed “Dogwood” timber harvest plan
18 activities in the floodplain of the lower Gualala River, such as skid road re-use or
19 construction, heavy equipment operation, log felling and removal, slash removal or
20 stockpiling, are likely to cause substantial long-term persistent or effectively irreversible
21 direct and indirect long-term impacts to sensitive riparian redwood understory vegetation.
22 The recovery time required by shade-adapted understory vegetation following logging
23 disturbances is likely to require at least many decades, and is likely to lag behind
24 regeneration of mature redwood forest overstory structure.

1 I declare under penalty of perjury under the laws of the state of California that the
2 foregoing is true and correct.

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5 Dated: August 17, 2016

William H. Russell

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William H. Russell

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