Charles L. Acker
P.O. Box 195
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April 22, 2013

National Marine Fisheries Service
Eric Shott, Fisheries Biologist

Dear Eric: Re: MRC HCP ITP

Forgive my last minute comments. I am a public water supply manager for over 30 years now and am producing a local radio program on the subjects of water and climate change. I have therefore been doing research recently and interviewing various scientists and experts on many subjects under this general heading.

I am greatly concerned with some misconceptions contained in the Draft EIS. My comments are limited by the time I had to review the lengthy document, but are centered on two aspects to do with Climate Change and carbon sequestration. These subjects are covered in section 3.8 in the EIS document.

Under 3.8.1.2 Carbon Sequestration:
The document states:
"While older trees can sequester carbon through new growth, sequestration occurs at a declining rate. Older trees remain pools of stored carbon until they decay through decline, death, or consumptive use..."

This misconception has driven much of the removal of old growth trees. Consider this quote from National Geographic Magazine published December, 2012 and written by David Quammen:

"Among the striking discoveries made by Sillett's team is that even the rate of growth of a big tree, not just its height or total volume, *can increase during old age*. An elderly monster like the President actually lays down more new wood per year than a robust young tree. It puts that wood around the trunk, which grows wider, and into the limbs and the branches, which grow thicker."

"This finding contradicts a long-held premise in forest ecology—that wood production decreases during the old age of a tree. That premise, which has justified countless management decisions in favor of short-rotation forestry, may hold true for some kinds of trees in some places, but not for giant sequoias (or other tall species, including coast redwoods). Sillett and his team have disproved it by doing something that earlier forest ecologists didn't: climbing the big trees—climbing all over them—and measuring them inch by inch.

"With blessings and permits from the National Park Service, they performed such high-altitude metrics on the President. This was part of a larger study, a long-term monitoring project on giant sequoias and coast redwoods called the Redwoods and Climate Change Initiative. Sillett's group put a line over the President's crown, rigged climbing ropes into position (with special protectors for the tree's cambium), donned harnesses and helmets,

and went up. They measured the trunk at different heights; they measured limbs, branches, and burls; they counted cones; they took core samples using a sterilized borer. Then they fed the numbers through mathematical models informed by additional data from other giant sequoias. That's how they came to know that the President contains at least 54,000 cubic feet of wood and bark. And that's how they detected that the old beast, at about the age of 3,200, is still growing quickly. It's still inhaling great breaths of CO_2 and binding the carbon into cellulose, hemicellulose, and lignin in a growing season interrupted by six months of cold and snow. Not bad for an oldster."

Be aware also of a project called the Ancient Tree Archive:

"We are a Michigan-based non-profit organization working on a global mission. We collect, propagate and archive the genetics of ancient champion trees from around the globe. We are planting trees to reforest the Earth. We invite you to discover our activities, see us in action in our videos, support us by shopping for Archangel logo wear and more in our store, participate in our blog, and let us know what you think by sharing your feedback."

This group has been planting redwoods from ancient stock, genetically superior to our second and third growth material.

Climate Change is seen by aware scientists as THE most important factor threatening the world today. I encourage MRC planners to consider the role of the forests in sequestering carbon as a factor of normalizing carbon in our atmosphere. I encourage tree planting of perhaps these genetically superior redwoods which will grow a superior tree with the ability to sequester massive amounts of carbon. It could be that this is such an important issue that we should use the experience and ability of MRC and its foresters to start a massive replanting of our forests.

Thank you for considering my comments,

Sincerely,

Charles L. Acker 707-877-1800