PACIFIC FOREST TRUST

March 8, 2013
Ms. Shelby Livingston
Chief, Climate Change Program Planning and Management Branch
California Air Resources Board
Sacramento, CA 95814

RE: Investment of AB 32 Auction Proceeds in Forests

Dear Ms. Livingston:

Thank you for this opportunity to provide comments on the proposed investment plan for cap and trade auction revenue. Investing these revenues from California's landmark emissions reduction program is an historic opportunity to further reduce climate-warming pollution and help prepare California for the unavoidable impacts of a warming planet.

We urge you to more fully incorporate the essential role of forests in meeting California's targets under AB 32. We simply cannot meet our 2020 and 2050 goals without both catalyzing greater sequestration and reducing forest-based emissions. Forests are the largest, safest, most expandable existing opportunity for sequestration, and the investments that improve forests' adaptive, resilient sequestration are the same ones that will best protect California's watersheds under climate change, improve our readiness to deal with extreme events, and reduce the intensity and costs of those events.

While the focus of this letter is on the multiple benefits of forest management and conservation to meet AB 32 goals, Pacific Forest Trust is united with colleagues in our continued broad support of an investment plan that includes a suite of environmentally-sound investment opportunities and adheres to the goals of AB 32, AB 1532 and SB 535. We believe that the investment plan should be a visionary document consistent with the guidance identified in these laws and our previous statements. Furthermore, we urge CARB to add investment principles to the draft plan to ensure that investments will result in GHG reductions that are supported by sound science, consistent accounting methods, and the transparency which helps ensure benefits outweigh adverse impacts.

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THE FACTS OF FOREST AND CLIMATE CHANGE

Forest loss and degradation is the second largest source of cumulative anthropogenic CO_2 emissions. California's forests are no exception to this. The emissions released from both the historic liquidation of old growth and second growth forests, and the conversion of over one third of our forests to other land uses, have released billions of tons of CO_2 that are still in the atmosphere. However, restoring and managing forests for more natural levels of carbon sequestration will yield multiple benefits in addition to reabsorbing a significant measure of those emissions.

There is no guarantee that forests will continue to provide even their existing levels of sequestration. The 2008 ARB Scoping Plan recognized this by including a Sustainable Forests provision, observing that current trends point to reduced sequestration in the forest sector. Conversion of forests to other uses, such as agriculture and development continue and will likely increase as the economy recovers.

Combined with smart policies and long term planning, investments in forest conservation and improved management present our most effective opportunity to "bend the curve" of global warming by actually removing significant amounts of CO_2 already in the atmosphere, both reducing and ameliorating the climate warming impact of CO_2.

Simply put, forests are absolutely essential for meeting the state's goal of an 80% reduction in GHG emissions by 2050. There is simply no way to de-carbonize California's economy to that extent without investments in an "all-of-the-above" mitigation strategy that includes forests both to increase sequestration and decrease forest-based emissions.

While the temptation may be to delay investments in forest conservation until a later time, it is important to realize that there is a "sweet spot" in the lifespan of an average forest stand when that stand annually absorbs more carbon from the atmosphere than it did overall the year before. (This is similar to the concept in forestry of the "Culmination of Mean Annual Increment" or CMAI). For most California conifer forests, this spans from about 40-100 years of age. Interestingly, this corresponds with the current age of most of California's at-risk forests. Forests at this age are dramatically increasing their uptake of sequestration. If we can conserve these forests as working systems while increasing their average age across the landscape, we can double and more the total carbon they hold in the time period between here and 2050.

This can be done while still managing these stands for timber production, extending harvest rotations over time, effectively increasing the average age of forest stands across the landscape. Doing so will rebuild the total inventory of timber and carbon, and indeed, yield greater carbon and timber over time than would otherwise be possible. As with a savings account where building the principal early yields greater returns later, restoring California's forest carbon principle now will yield vastly greater returns by 2050. We have an optimal moment for achieving high investment returns.

In addition to capturing and safely storing atmospheric carbon, investing in forest conservation and directing forest management to create more resilient forest conditions will help California adapt to a changing climate. This can be done in a cost effective way that harnesses the "enlightened self interest" of landowners by using Working Forest Conservation Easements (WFCEs).

A proven legal tool that is permanent, WFCEs provide an elegant, durable mechanism to achieve this in an affordable and enforceable way. WFCEs use specific restrictions that are attached to the deeded property title to avoid the conversion of forests to non-forest uses (avoiding associated

emissions), achieve increased carbon stocks on the landscape, implement landscape-scale adaptation measures, and enable public recreation opportunities, all while keeping the land economically productive and in private ownership and management. WFCEs are monitored for compliance in perpetuity by qualified land trust partners. Both the ongoing management costs and the perpetual monitoring and reporting are achieved without any ongoing cost to the state. WFCEs can be obtained at a fraction of the cost of purchasing the land outright, and avoids the ongoing operations and maintenance costs associated with fee purchases.

Well-established science and accounting procedures exist to quantify the carbon benefits of improved forest management and avoided conversion. Increasing the average age of forests and then maintaining the increase–something such WFCEs require—increases carbon stocks overall, even including the carbon in forest products. Multiple studies (i.e. Harmon; Law) in the last two decades have affirmed and reaffirmed this for western forest types. Further, a 2010 study found that shifting from an industrial-style management of forestland to more low-impact forms of management in New England increased net carbon sequestration by more than half. With California's highly productive forests, such increases of carbon with increasing forest age are substantially higher.

THE CASE FOR INVESTING IN THE KLAMATH-CASCADE REGION, AND THE MT. SHASTA HEADWATERS

The Pacific Forest Trust recommends investing in forest and watershed conservation in a focused, strategic manner. Based on many years of collaborative planning with the Department of Fish and Wildlife, conservation biologists, and others, we suggest investing in the Klamath-Cascade region of Northern California, beginning around Mt. Shasta for the unique conjunction of climate, water supply, and adaptation benefits this region provides. Please see the attached memo for further discussion of this opportunity.

Investment in this Region's forests will protect California's largest source of water, which is becoming ever more important as climate change reduces the snowpack farther south in the Sierra. Using WFCEs, we can prevent degradation of watershed function and ensure continued ecosystem services in a warming climate. The forests of the Klamath-Cascade filter and store a large amount of the freshwater used annually in California. The U.S. Bureau of Reclamation, the largest single water-rights holder in California, has their largest surface reservoir at the base of the Klamath-Cascade at Lake Shasta. The importance of the ecosystem services provided by the forests of the Klamath-Cascade in cleansing and regulating water for California cannot be overstated.

These easements will also help ensure a diversified, resilient forest-based economy (including timber production), contributing to economic stability in an economically challenged region of the state.

Additional Benefits: Administration's Priorities – Transportation

Investing in WFCEs in the Klamath-Cascade also dovetails with several of the Administration's priorities for cap and trade revenues stated in the January budget. Protecting forests in the area from conversion to various forms of sprawl will help disincentivize car travel, and consequently blunt the growth of regional CO_2 emissions. Further, forest restoration in the region—California's largest source of timber products—will yield substantial amounts of woody biomass waste materials that, under SB 1122, can provide distributed, small-scale energy sources throughout this vast region. This energy can be utilized to power electric car charging stations all along Interstate 5, in addition to providing power to rural communities (see below).

The Administration's Priorities – Energy Efficiency

Forests contribute to greater energy efficiency by supplying a stable, distributed, "24/7" source of renewable energy that displaces fossil fuels. SB1122 has already set a goal of 50Mw of distributed renewable energy sourced from forest biomass in the next several years. As this form of renewable energy continues to grow in California, smart investments in WFCEs can ensure that there is a steady, sustainable supply of material for this important renewable energy source. As importantly, WFCEs can ensure that the source of this material is indeed from restoration thinning, improving rather than depleting the overall forest condition, resiliency and carbon stocks over time.

The Administration's Priorities – Forest Management

The Administration also identified improved forest management practices as one of the priorities for cap and trade revenue investment. WFCEs provide an excellent opportunity to invest in cost-effective, practical forest management that addresses climate change. WFCEs can facilitate adaptive, resilient landscapes, safeguard water supplies, provide habitat corridors for wildlife forced to adapt to climate change, and provide a source of renewable energy within the context of a working resource economy.

The Klamath-Cascade region—some 10 million acres—is still relatively undeveloped and rural enough to save as a working ecosystem. It is one of the few regions in the state—indeed in the lower 48 states—where this is still an option. Using the smart strategic plan developed in conjunction with state and federal agencies, academics, and others, provides California with an opportunity to maximize investment impact. Committing to this bold visionary plan, rather than supporting numerous uncoordinated projects, truly presents a transformative opportunity. Importantly, WFCE projects in the Klamath-Cascade are "shovel-ready" and can be implemented through existing agencies and programs such as those of the Wildlife Conservation Board. As additional funds become available in future years, the effort can scale up over time.

WHY USE AUCTION REVENUE FOR FOREST CONSERVATION

One important filter for evaluating investment opportunities should be "are there other funding sources to accomplish these outcomes"? In this case, California has no significant ongoing program to accomplish these climate readiness and landscape conservation goals. Most forest conservation and improved management has been accomplished through bond funds, which are both expensive due to borrowing costs, and nearly exhausted.

Further, forest and watershed conservation investments are extremely scalable—incremental increases in funding can achieve additional sequestration and other related benefits. And state investment can also leverage federal funds, such as from the US Forest Service's Forest Legacy program. Indeed, the WFCE with Hancock Timber Management (highlighted on the attached map) is one of the top ranked Forest Legacy projects in the country, and was included in the President's 2013 Budget for a $2.3 million appropriation.

CONCLUSION

California is leading the nation in addressing perhaps the greatest environmental challenges of our time in a comprehensive, integrated way. This first investment plan represents the state's ambitions and vision for a climate-ready future. A strategic, integrated approach to investment across key sectors, including forests, will ensure that this vision becomes a reality. Investing in

instruments like WFCEs will not only reduce emissions and indeed sequester emitted carbon already in the atmosphere; they scale –up easily, help prepare us for a warming climate, help economically distressed communities as well as provide for wildlife adaptation. This is a smart investment now, and will create even more compelling future returns.

We appreciate the Administration's commitment to combatting climate change and readying California for a warmer world, and look forward to working with you to make sure that forests are an effective aspect of our collective efforts.

Yours sincerely,

Laurie Wayburn

President

Encl: Memo: Investing in Forests for Multiple Climate Benefits and Economic Sustainability

Investing in Forests for Multiple Climate Benefits and Economic Sustainability

MEMO

INVESTING CAP AND TRADE AUCTION REVENUES IN FOREST CONSERVATION CAN SIGNIFICANTLY INCREASE CARBON SEQUESTRATION IN RESILIENT, ADAPTIVE FORESTS. USING A FOCUSED, STRATEGIC PLAN, THESE INVESTMENTS WILL ALSO IMPROVE CALIFORNIA'S READINESS FOR CLIMATE CHANGE AND LEAD TO MORE STABLE RURAL FOREST ECONOMIES.

Natural systems, most particularly forests, are known to be the most safely expandable carbon sinks globally. Forests in California are some of the most productive in the world, and can store vast amounts of carbon. Yet, traditional resource economies incentivize the loss and degradation of forests, which has had devastating consequences for climate, as well as other forest functions. California has emitted billions of tons of carbon dioxide through forest loss and degradation. Yet, this historic devastation of forests also poses a transformational opportunity to restore these forests, and, in the process, re-absorb the carbon dioxide (CO_2) emitted, create a significant source of stable employment, catalyze clean renewable energy based on forest restoration, and secure California's most important watershed. This is precisely because protecting and restoring resilient natural landscapes are perhaps the most cost effective investments that can be made to simultaneously reduce harmful CO_2 emissions and support adaptation.

One of the most devastating impacts of climate change is the progressive shift north and to higher elevation for the snowpack that provides much of California's water. In addition to the consistent modeling results that predicted these shifts, we already see glaciers in the Sierra continue their historic 100-year decline (now less than half of the 1910 extent). Notably, the glaciers on Mt. Shasta that help feed the Sacramento River have increased by almost 20%.

The Sacramento River watershed provides 80-85% of the inflow to the San Francisco Bay, over half the water of both the state and federal water projects that are so vital to the state's agricultural industry, and drinking water to 25 million Californians. As such, the health of this watershed is vital to the state's economy and well being.

However, the health and forested nature of the Sacramento watershed is far from guaranteed. Private forestland owners own half of the watershed. Their economic incentives are to use this land for its highest and best economic use—hence for development and rapid timber production. These actions can significantly impair watershed function. Watershed quality declines significantly when 10-20% of the forest is fragmented, as through development. Further, the

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simplified, young forests favored for timber production are less effective in capturing, storing and transporting clean, cool, stable water supplies.

We propose a substantial, focused, strategic investment to secure this invaluable watershed through the acquisition of Working Forest Conservation Easements. This will prevent hundreds of thousands of tons of CO_2 emissions and increase carbon stores by millions of tons of carbon. It will also secure the foundation for the economic backbone of this region, the forest industry, while broadening that from traditional products only, and expanding to encompass climate, water, energy and recreation/habitat services. This will also create new jobs in forest restoration, and provide the basis for a new, distributed small-scale forest bioenergy sector to utilize the waste material from sustainable forest management and restoration. Finally, it will guide the management of forests in the region to provide better habitat and migration routes for species adapting to climate change, and will connect existing public land reserves in the region. California Department of Fish and Wildlife identifies this region as one of the most critical for successful adaptation of the state's unique biodiversity.

To achieve these goals at a meaningful scale in this region, we propose that California commit to investing at least $1 billion in Working Forest Conservation Easements over the next seven years. Such an investment could ramp up over time, as landowners become aware of the opportunity and allowing agencies and NGO partners to develop and propose landscape-scale projects. The first 3-year investment plan should aim to dedicate at least $50 million annually, with subsequent plans increasing investment as additional funds become available and larger projects are ready to complete.

PFT has worked closely with the Natural Resources Agency, both CalFIRE and California Department of Fish and Wildlife, as well as with the Bureau of Reclamation and US Fish and Wildlife Service, to identify the most strategically important properties to protect to ensure wildlife habitat, forest resilience, and forest watershed functions. These projects are ready to implement. Key private landowners have voluntarily stepped up to protect their lands with easements, and manage them according to guidance that California Department of Fish and Wildlife has collaboratively developed with PFT to ensure wildlife adaptation and other climate benefits.

PFT has identified over 150,000 acres of privately owned portions of the Sacramento watershed in the most threatened areas of its key tributaries, as well as along the main stem, where this approach could be implemented in 2013-2015. Over the next few years, there is a pipeline of additional lands in the region that will be "shovel ready" for implementation in 2016-2020. The map on the following page illustrates some of these projects just in the Mt. Shasta Headwaters area.

For further information regarding this proposal, please contact:

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Mt. Shasta Headwaters Conservation Area

Pacific Forest Trust Working Forest Conservation Easements (WFCE) Projects in Development - June 2012

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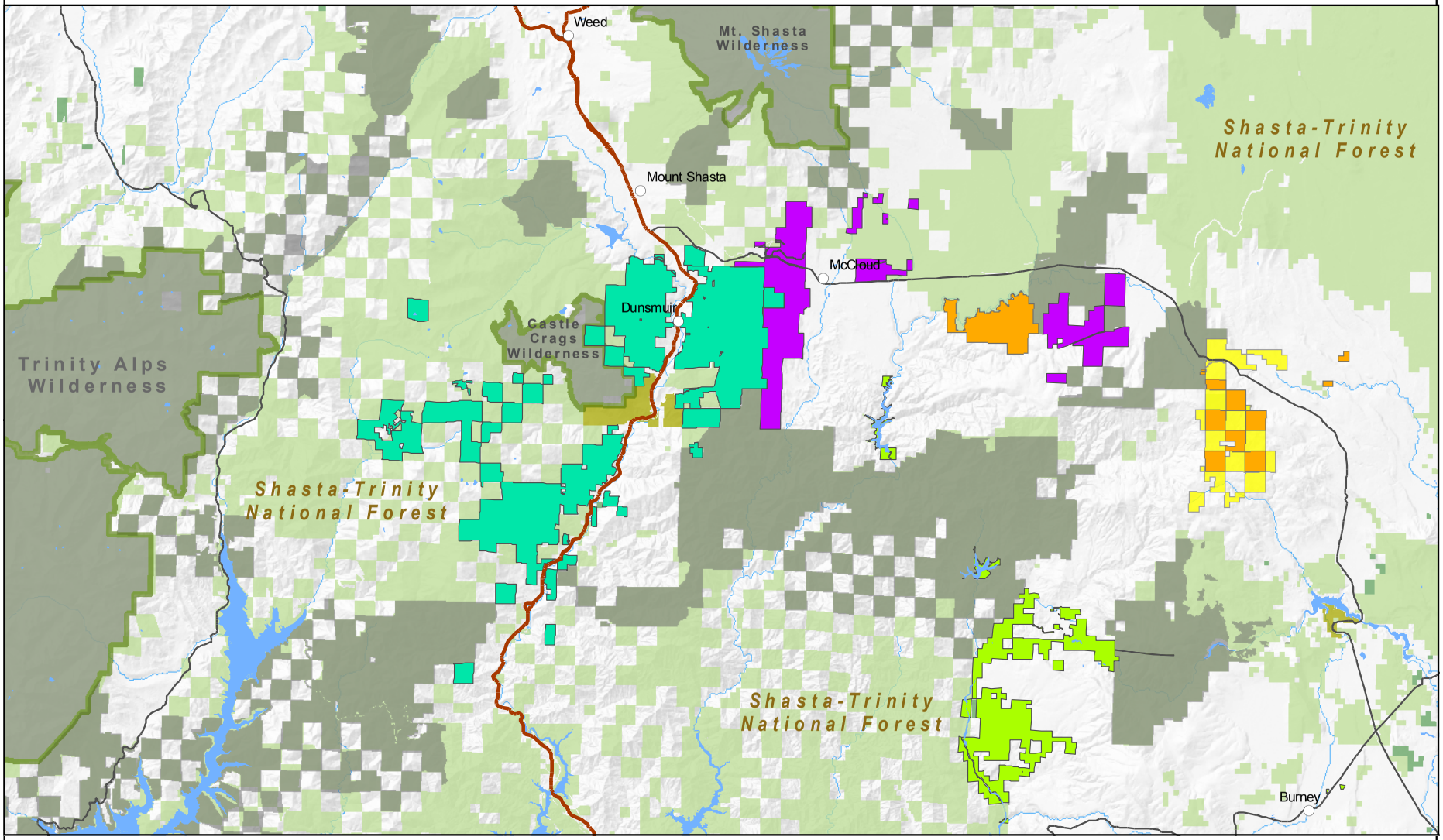

Public Lands
- US Forest Service
- National Park Service
- US Bureau of Land Management
- State of California

Conservation Easement Projects
- Hancock River Block
- Hancock Town Block
- Stewardship Council PG&E
- Roseburg Sacramento Canyon

PFT Conserved Land
- Bascom Pacific WFCE
- Roseburg Bear Creek WFCE

Public Reserves
- Wilderness Area
- Late Successional Reserve

Transportation
- I-5
- State Highway
- Pacific Crest Trail

N W E S

0 1.5 3 6 Miles

0 2 4 8 Kilometers

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Map Produced by The Pacific Forest Trust | Map date: June 25, 2012
Created with ESRI ArcMap 9.3 Software | Projection: Teale Albers NAD 1983