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United States Senate

May 23, 2015

The Honorable Sally Jewell
Secretary
Department of the Interior
1849 C Street, N.W.
Washington DC 20240

Dear Secretary Jewell:

I am writing to follow up on my conversation with you last summer about Rapid ʻŌhiʻa Death (ROD), and to ask you to direct the National Park Service (NPS) and the Fish and Wildlife Service (FWS) to provide additional personnel and resources to protect our ʻōhiʻa. Simply put, this is the most urgent environmental crisis to face our rainforests in generations, and we implore you to use an all-hands-on-deck approach. If this were a forest fire, we would have no hesitation mobilizing whatever assets and resources were necessary. The scale and scope of the danger from ROD warrants the same coordinated response, and merits your urgent attention.

Since our conversation, scientists have concluded we have a narrow window of opportunity to get ahead of this crisis and prevent the spread of ROD from Hawaiʻi Island to the rest of the State. Success or failure hinges on immediate action from land managers across Hawaiʻi Island, and I have made a request to Governor Ige to declare a state of emergency that will allow him to, in effect, reprogram State funds to address this crisis.

A copy of an earlier Hawaiʻi Delegation letter to apprise you of the emerging threat of ROD is enclosed for your reference. Our understanding of the disease has grown significantly, and what we have learned is sobering. ROD is incredibly virulent, with estimated mortality rates of over 20%. To put this in perspective, mortality rates for even the most destructive outbreaks of Sudden Oak Death are only 3-5%.

Scientists are still working to understand exactly how ROD spreads, but experts are confident that frass from boring beetles comprises an important vector. Ambrosia beetles bore into infected wood, and push out grains finer than talcum powder that are easily carried by the wind. These particles are infested with spores from the ROD pathogen, the fungus *Ceratocystis fimbriata*. Significantly, the spores carried this way—aleurioconidia—are thick-walled and durable, which means that frass from infected wood is likely to remain a threat for years after a tree dies.

Looking at the incidence of the disease revealed by the State of Hawaiʻi's most recent survey (April 2016) of Hawaiʻi Island's forests, and overlaying it with typical prevailing winds provides

further support for the experts' assessment that ROD is spreading long distances on the winds because ROD can be found almost all the way around the island. All told, the survey found a total of 32,733 acres with ʻōhiʻa tree crowns partially or entirely brown, which indicates the advanced stages of ROD infection, and 4,624 acres with ʻōhiʻa trees that had completely lost their foliage but with fine branches still attached, which indicates recent ROD mortality. A map that shows the results of the survey is enclosed.

For now, the Hamakua Coast appears almost completely free of ROD—and this is why we need your help. Prevailing winds are currently working to keep infected frass from spreading ROD to the Hamakua Coast, but should it become infected, the winds will begin working against us, and it is only a matter of time before a strong weather event carries the fine, talc-like frass across the channel to Maui.

Working together federal, State, and local agencies on the ground have confined ROD to Hawai'i Island through the emergency quarantine imposed by the Hawai'i State Department of Agriculture, but the best scientific evidence suggests that the quarantine will not be enough, should ROD spread to the Hamakua Coast. Preventing this will take sustained vigilance to identify infected trees—along with continued investment in research to understand ROD and its epidemiology, and to develop better management responses.

Through the U.S. Geological Survey, your Department has taken an active role to support research, and the NPS and FWS have both participated in the ROD Working Group established to respond and protect Hawai'i's native forests and the biodiversity that they shelter. Now, however, the researchers have given us clear guidance on how we can stay ahead of ROD and prevent its spread to the rest of the state. I request you to direct the FWS and NPS to provide the additional personnel and resources that will be necessary to protect our ʻōhiʻa.

Sincerely,

BRIAN SCHATZ
U.S. Senator

Enclosures

Congress of the United States
Washington, DC 20515

June 18, 2015

The Honorable Sally Jewell
Secretary
Department of the Interior
1849 C Street, N.W.
Washington DC 20240

Dear Secretary Jewell:

We are writing to request your assistance on an emerging crisis in Hawai'i's rainforests: Rapid 'Ōhi'a Death syndrome (ROD). At this time, a small team of U.S. Department of Agriculture (USDA) researchers in Hawai'i have isolated the cause—a fungal infection known as *Ceratocystis*. We are engaging with the USDA to bring more resources to bear on their investigation, but we will need your help to translate their findings into conservation actions.

The stakes could not be higher. 'Ōhi'a, a native hardwood, is the backbone of our Hawaiian rainforests. The first to recolonize after lava flows, 'ōhi'a opens the way for other native plants to form the vibrant ecosystems that are critical habitat for many of our endangered species. Without 'ōhi'a to anchor our native rainforests, invasive plants such as strawberry guava, albizia, and miconia are even better able to usurp Hawai'i's landscape, and add further jeopardy to bird, plant, and insect species already on the brink of extinction.

Natural resource managers, policymakers, and landowners across Hawaii have become increasingly alarmed by the rapid death of tens of thousands of mature 'ōhi'a trees across thousands of acres of Hawaii Island. This epidemic appears to be escalating rapidly. Analysis of remote sensing imagery from 2012 revealed that roughly 2,500 acres of 'ōhi'a forest had suffered mortality across the Puna District of Hawaii Island. By 2014 the affected area in the same Puna rainforests had expanded to over 15,000 acres. Affected areas are increasing in size by the month, and outbreaks of *Ceratocystis* in new areas are discovered every few months.

Currently, our team of scientists at the Daniel K. Inouye Pacific Basin Agriculture Research Center (USDA Agriculture Research Center) and the Institute of Pacific Islands Forestry (USDA Forest Service) are working to pin down the vectors for the spread of *Ceratocystis*, and to develop management strategies to bring this pathogen under control. At present, *Ceratocystis* has only been found on Hawai'i Island, but swift action is needed to intervene and prevent its spread to other islands, and to minimize its damage to Hawai'i Island's forests.

From the critical bird habitat in the Hakalau Forest National Wildlife Refuge to the extensive lands of Volcanoes National Park, the Department of the Interior is a critical partner to contain

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and control *Ceratocystis*. We hope that we can depend on your help to join the federal team to protect this treasured foundation stone of Hawai'i's environment.

Sincerely,

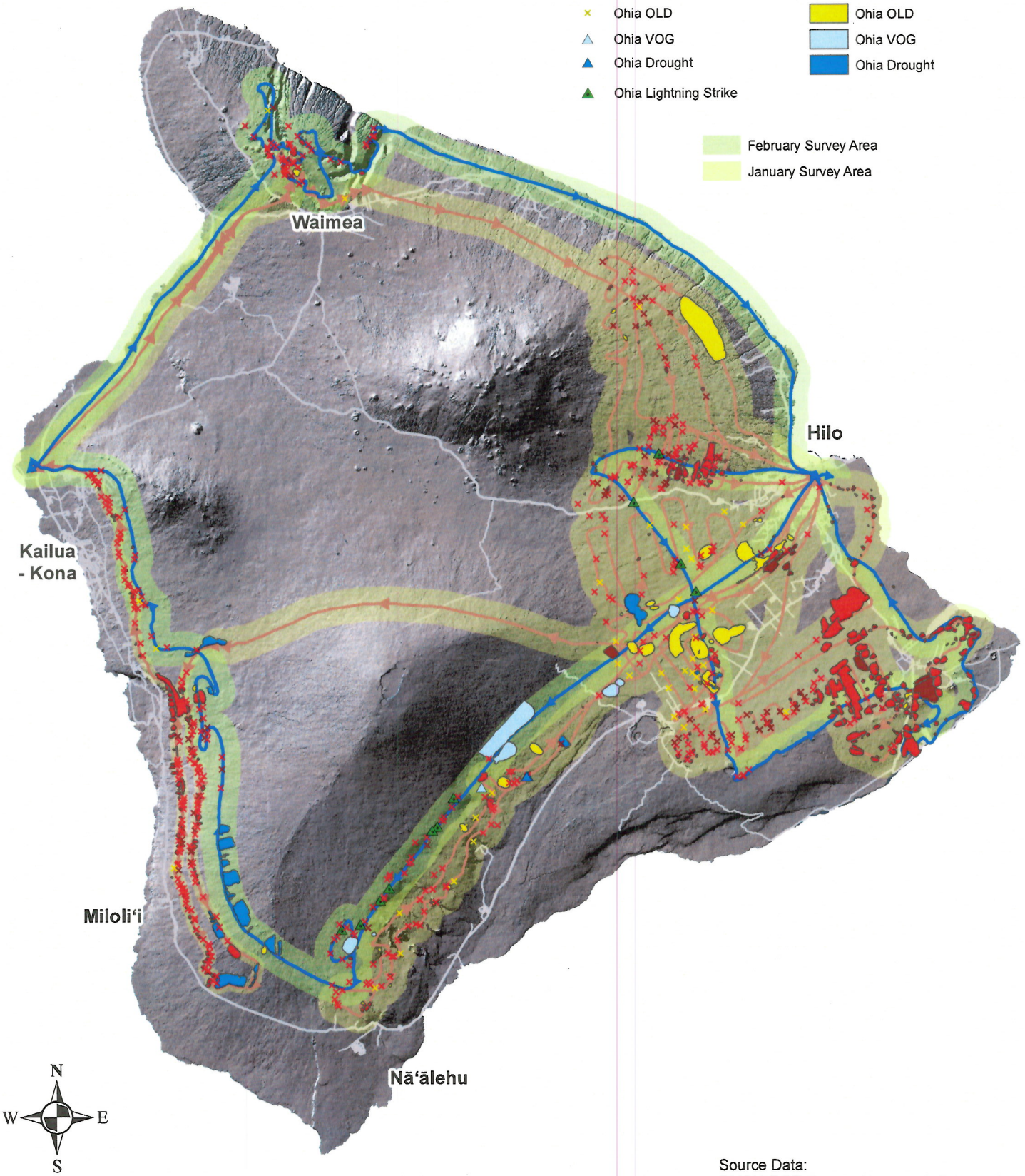
BRIAN SCHATZ
U.S. Senator

MARK TAKAI
U.S. Representative

MAZIE K. HIRONO
U.S. Senator

TULSI GABBARD
U.S. Representative

Rapid ʻŌhiʻa Death Aerial Surveys
Hawaiʻi Island
(January & February 2016)



Source Data:
DMSM ROD Survey (January & February)
USDA Hawaiʻi 2011 Natural Color Imagery
State of Hawaiʻi

Projection: WGS1984 WebMercator (AuxiliarySphere)
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