From: Glenn Bissell

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To: Rob Taylor

Subject: Summary of Dr. Glenn Bissell's Examination of the Bandon Marsh NWR

It was a pleasure to finally meet you in person, see the Refuge first hand, and get an update on what's been going on since we last talked a few months ago. Also, I have some thoughts on your mild season this year for mosquitoes and the Councilman's thought about "problem solved":

- The inlet for the refuge is just to the left of the bridge as you head toward Coos Bay. That's quite a distance from the mouth of the river. Since we're in our third year of drought in the NW, as you mentioned, the river flows were lower than the previous year. So, it might have been too little water to get into many sources on the refuge even on high tides.
- 2. The Aedes genus which includes the Salt Marsh mosquito (dorsalis) are direct descendants of the snow melt mosquitoes which survived the last ice age. One reason they survived is the method of overwintering for the genus. Many of our disease transmitting mosquitoes, Culex sp. and others overwinter as adults, the Aedes species over winter as eggs-- all the adults die. Many of these eggs have been shown to survive in moist conditions for years. I saw that first hand in Lake Tahoe on a year that our yearly snow fall was over 200%. That year we had mosquitoes developing in numerous sources that had been dry all season long for the last 12+ years.

The bottom line-- your low mosquito year was thanks to Mother Nature with the drought-- not a one or two season treatment with Bti, or any product for that matter-- regardless of the control they got for the last two, I'll give you odds of 100:1 that you'll have the a return of high number mosquitoes when the yearly rain/snow totals return to normal. Also, not all of the eggs hatch every year because of many reasons. So higher tides will be able to still activate eggs that were laid above the high water line of last year.

Good luck with your fight. Please keep me posted on your progress. Call me if I can be of any help in the future. There are certainly many flaws in their approach to handling this situation. As I mentioned at our meeting, Politics and public health pest control don't mix any better than oil and water. You only need to watch the Ebola issue to see this in action. I'm on the side of science

Thanks again for taking time to meet me. I went to Gold Beach and back today. I'll be back next year in my motorhome.