Raszka Shelley

From: Gallagher Chuck
Sent: Monday, March 02, 2015 9:04 AM
To: Raszka Shelley
Subject: FW: Testimony by Billy Don Robinson, State Vice-president, Native Plant Society of Oregon, in support of HB2183 for Native Plant Society of Oregon

-----Original Message-----
From: Billy Don Robinson [mailto:bdmeme@gmail.com]
Sent: Monday, March 02, 2015 7:19 AM
To: Gallagher Chuck
Cc: Rep Frederick; Sen Dembrow; Rep KenyGuyer; Rep Hoyle; Rep Reardon; Rep VegaPederson; Rep Fagan; Rep Gallegos; Rep Buckley; Sen Gelser; Sen Edwards C; Sen Hass; Sen Prozanski; Sen Rosenbaum; Sen Shields; Rep Rayfield
Subject: Testimony by Billy Don Robinson, State Vice-president, Native Plant Society of Oregon, in support of HB2183 for Native Plant Society of Oregon

Portland General Electric's option to plant many tens of thousands of acres of a catastrophic invasive species threatens every streamside habitat in the Columbia River Drainage. This species, Arundo donax, is considered to be a fuel substitute for PGE's coal-fired energy plant at Boardman, Oregon. Arundo donax, or "Giant Cane" cannot be contained, and will inevitably escape control if planted on an industrial scale. Once Giant Cane escapes from multiple, widely dispersed infestations, it cannot be eradicated effectively. This last assertion has already been established in California and Texas.

The huge economic losses that will follow should PGE's option be executed are deeply troubling. Farmers and taxpayers, as well as those with jobs in the non-extractive natural resources sector of Oregon's economy,like tourism, will suffer. This will happen in areas where jobs are extremely hard to find. Creating appropriate levels of bonding are a last ditch effort to mitigate against any industrial use of Arundo donax, be it as a coal substitute or as a source for production of cellulosic ethanol.

For a far more detailed analysis, please see testimony submitted in support of this bill by Dr. Judi Sanders, Immediate Past President, Native Plant Society of Oregon.

The Confederated Tribes of the Umatilla Indian Reservation also submitted excellent analysis.

The following information provides a brief summary of concerns raised by the Native Plant Society of Oregon.

ODA's current rule is woefully inadequate to the challenge of Arundo donax.

ODA is mistaken when they say Oregon is north of Arundo donax's expected range.

ODA's assessment ignores basic climate science and available research into how and under what conditions Arundo donax invades and dominates streamside habitats. For example, ODA places great emphasis on how Oregon's cold winters will prevent Arundo donax from becoming invasive. In fact, normally cold winters in Eastern Oregon are essentially a thing of the past. This very winter is a telling example. Deep, "10 inch" frozen ground in Umatilla County and the surrounding area is no longer a given and will no longer halt the spread of Arundo donax.

A COMPARISON OF TWO METHODS FOR CONTROLLING ARUNDO DONAX

Shawna Bautista
Angeles National Forest

The importance of riparian habitats for maintaining biological diversity is well known. Since perhaps 95% of the original riparian habitat in southern California has been destroyed or severely degraded, maintaining the habitat we have left is crucial if we are to preserve the native plants and animals that depend on this ecosystem.

Unfortunately, exotic weeds are invading and degrading the habitat that remains, including that on the Angeles National Forest (USFS 1993, Bautista 1994). Over the last 25 years southern California rivers and tributaries have become infested with *Arundo donax* (Arundo, or giant reed), and other invasive weeds (Rieger and Kreager 1989, The Nature Conservancy 1996). Arundo is a bamboo-like grass that grows more than 25 feet tall, can completely replace native vegetation, and creates dense homogenous stands that introduce a fire cycle into the riparian ecosystem, disrupting its normal dynamic processes (Bell 1993). Dense stands also destroy wildlife habitat, transpire excessive amounts of water, and block stream flow. On the Angeles National Forest Arundo is degrading essential habitat for the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), an endangered fish, and affecting potential or historical habitat for two endangered birds, the least Bell's vireo (*Vireo bellii pusillus*) and the southwestern willow flycatcher (*Empidonax traillii extimus*)(Bautista 1994).

Arundo control is a relatively new and evolving field with additional methods and refined techniques appearing each year. The Angeles National Forest has tried two methods for controlling Arundo in one of our project sites in San Francisquito Canyon: the cut stump method, and a cut-resprout-spray method.

The cut-stump method was tested during a pilot project in September 1993. Forest Service fire crews cut the standing Arundo to near ground level using chainsaws and pulled the cut cane away from the remaining stumps. The cut stumps were then treated with 100% glyphosate (Rodeo[®][1]) within three minutes after cutting. Backpack sprayers with a wand and a flat fan nozzle were used to apply the chemical, to which a dye was added. The dye allowed identification of treated stumps and prevented double-treating or missing areas of cut cane. Non-target vegetation was not affected by herbicide because delivery of chemical from the wand and nozzle was accurate, application was near ground level, and Arundo often excludes plant growth around its perimeter.

Initial attempts to transport cut cane to an administrative site for disposal proved difficult, and small pieces of cut cane blew out of the stakeside truck during transport, potentially spreading the infestation. Therefore, most cut canes were stacked in an open, dry portion of the riverbed to dry and later burned.

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1 Rodeo® and RoundUp-Pro® are registered trademarks of the Monsanto Company.

Approximately two acres of Arundo on a 15-acre area were treated using 30 gallons of Rodeo® and 99 person-days at an estimated cost of $9300 per acre of Arundo. Some clumps of Arundo were completely killed with one treatment, but most clumps showed some resprouting in late spring and summer of the following year. Resprouts frequently showed characteristic signs of herbicide effect, such as short internodes and white streaking. Unfortunately, due to difficulty in awarding a contract, no follow-up applications of herbicide occurred the following year and by 1995 Arundo had regrown and invaded to pre-treatment densities.

In 1995 a full-scale control project was initiated in the same area as the 1993 pilot project, but utilized a different method . This effort involved mulching the standing Arundo in place, and then applying glyphosate to the resprouts. A contractor mulched the Arundo using a Seppi Midiforst hammer flail mower attached to a Ford 9030 tractor. The tractor is articulated in the middle, which makes it very maneuverable able to avoid even small willow (*Salix* sp.) and mule fat (*Baccharis salicifolia*) shrubs. The Seppi produces small mulch as well as larger split canes. Some large canes are pushed over and become buried beneath the mulch. Resprouting of these canes was not a concern because we planned to treat resprouts. Initial mulching occurred in October and November 1995. Resprouting occurred the following spring (1996). Resprouts were treated with a 5-15% solution of glyphosate (Rodeo® or RoundUp-Pro®) in April, May, July, and August of 1996. "Hand can" sprayers, the size of a large fire extinguisher, or a sprayer mounted on a four-wheel all terrain vehicle were used to apply the herbicide. As before, a dye was added to the chemical and no native vegetation was affected. Resprouts were treated again in June and September of 1997. From October 1995 to September 1997, using the Seppi and follow-up herbicide treatment, 8.8 acres of Arundo on a 46-acre area were mulched in 10 person-days, and 45 gallons of herbicide and 13 person-days were used to treat resprouts. Mulching and the first five herbicide treatments cost approximately $8,425 per acre of Arundo. Retreatments for 1997 cost about $190 per acre. Arundo is continuing to resprout in the treatment area, but comprises only 1% of the vegetative cover, as compared to 30-80% prior to treatment. It will take a long-term commitment of follow-up treatments for the control program to succeed.

In comparison, the mechanical mulching using the Seppi cost almost $1,000 less per acre than the cut-stump method, and required only a fraction of the time to accomplish four-times the acreage. Another contract we recently awarded (to the same contractor) for Arundo control will cost approximately $4,085 per acre of Arundo for initial cutting and mulching and five years of follow-up treatments: less than half the cost of the previous contract. It should be noted that mechanical mulching always involves at least some hand-cutting of those Arundo clumps or canes growing within native vegetation, or those growing in inaccessible places. The tractor is extremely maneuverable, but is not well suited to steep terrain or areas without appropriate access.

Results of the control program are very encouraging so far. Native willows (*S. exigua* and *S. lasiolepis*) and cottonwood (*Populus fremontii*) show increased resprouting and growth, and mule fat is now sprouting leaves along the entire length of its stems instead of just at the tip, as it did when Arundo was present (Nickerman 1997). Not

surprisingly, weedy or pioneer species such as wild mustard (*Brassica nigra*) and annual bur-sage (*Ambrosia acanthicarpa*) have invaded the treatment area, but we expect them to diminish as succession proceeds. Willow and mule fat seedlings, as well as juncus (*Juncus macrandrus*), sedge (*Carex* sp.), miner's lettuce (*Claytonia parviflora* and *C. perfoliata*), and six species of lupine (*Lupinus bicolor, L. bethamii, L. concinnus, L. hirsutissimus, L. nanus, and L. succulentus*) have been found growing in the old Arundo mulch (Nickerman 1997).

Unarmored threespine sticklebacks were seen breeding in the treatment area during late spring 1996 and summer 1997 (Bautista, personal observation). Other wildlife commonly seen after Arundo was removed include mule deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), California quail (*Callipepla californica*), western toad (*Bufo boreas*), and many species of neotropical migratory birds.

In conclusion, removing Arundo can have dramatic benefits to native vegetation and wildlife and appears to be an effective method for restoring riparian ecosystems. Mechanical mulching, using a contractor, is more efficient and less costly than the cut-stump method, using Forest Service fire crews, for controlling Arundo. Costs for mechanical mulching are decreasing as competition for business increases. Some use of hand-cutting will always be required and may be the only method feasible in rough terrain.

ACKNOWLEDGMENTS

The Angeles National Forest would like to thank the Hardman Foundation and Monsanto Company for support of the 1993 pilot project. Funding for the 1995 project was received from Los Angeles County Department of Public Works. We would also like to thank Jeff Van Diepen of Pestmaster Services, Inc. for his foresight and willingness to take risks in order to accomplish acres of Arundo control. Randi Jorgensen reviewed a draft of this document.

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ARUNDO AND SALTCEDAR: THE DEADLY DUO

A Workshop on Combating the Threat from Arundo & Saltcedar

PROCEEDINGS OF THE ARUNDO AND SALTCEDAR WORKSHOP

June 17, 1998
Ontario Hilton Hotel
Ontario, CA

Presented by:

California Exotic Pest Plant Council
Monsanto Company
Riverside County Regional Park & Open Space District
Team Arundo
The Nature Conservancy
University of California Cooperative Extension,
Imperial County

From: Billy Don Robinson [mailto:bdmeme@gmail.com]
Sent: Monday, March 02, 2015 9:27 AM
To: Gallagher Chuck
Cc: Judi Sanders; Kevin Weitemier; Kelli Van Norman
Subject: HB2183/Native Plant Society of Oregon/Supporting documentation for HB2183/bonding costs

The following is an excerpt from USFS comments to the original ODA Temporary Rule regarding bonding levels for Arundo donax bio-fuel production. Please see the attachment which supports the cost figures.

Comments (in part) on proposed bond amount in the temporary rule:
(i) The contracting company will post a bond of $1,000,000 to
cover costs of eradicating giant reed grass both in the production fields and wild land areas. [This is not sufficient even for just the planted 400 acres. In 1998, my costs to control, but not eradicate, Arundo using mechanical and chemical methods were just over $4,000/acre (Bautista 1998, attached). Using this figure, and not even adjusting for inflation since 1998, the cost to treat 400 acres would be $1.6 million. This does not even cover the cost of treating escaped populations in difficult to access riparian area that require hand applications. What happens if control on planted and escaped areas is needed and control costs exceed the bond? Does the contractor still have to pay the costs?]

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"This land is your land!" Woody Guthrie.

"Collectively, human decisions and practices can either continue to degrade the world that nurtures all living entities - or begin to restore it."
- Sustainable Sites Initiative 2008 Draft Guidelines and Performance Benchmarks

Practically speaking, a life that is vowed to simplicity, appropriate boldness, good humor, gratitude, unstinting work and play, and lots of walking brings us close to the actually existing world and its wholeness." -Gary Snyder

Please see the main points listed below, along with links to source documents from the scientific literature.

ODA's position is very lenient when contrasted to that of Washington State.

"Arundo donax was not listed as a noxious weed in 2014; instead it was added to the Washington State Department of Agriculture's Prohibited Plant List, also known as the quarantine list, WAC 16-752, with the exclusion of variegated cultivars.Being added to the quarantine list means it is prohibited to transport,buy, sell, offer for sale or distribute plants or plant parts of the regulated species(Arundo donax)within the state of Washington. Arundo donax is still on the state noxious weed board's monitor list."

http://www.nwcb.wa.gov/pdf/Draft_written_findings_arundo_donax_2014%20monitor%20list.pdf

In the new, warmer Oregon, along rivers, creeks, and wet ditches Arundo Donax will spread exactly like it has in California.

Please note page six graphic "potential spread of Arundo donax".

http://www.nwcb.wa.gov/pdf/Draft_written_findings_arundo_donax_2014%20monitor%20list.pdf

Oregon State Department of Agriculture has conducted a risk assessment, which is badly flawed in the opinion of the Native Plant Society of Oregon. Even this flawed assessment is disturbing with regard to risk. Please see p. 5.

http://www.oregon.egov.com/oisc/docs/pdf/arundo_ra2011.pdf

Arundo donax was on the ODA Watch List. Then it was removed. The Oregon Invasive Species Council had this to say. Please note "Giant Reed" or "Giant Cane" are common names for Arundo donax.

"Recently, two species that the Oregon Department of Agriculture (ODA) put in the "not worth worrying about" category have come back to our attention, and we're giving them a second look. They are giant reed (Arundo donax) and brown marmorated stink bug (Halyomorpha halys).

"Giant reed is a noxious weed in tropical and warm temperate areas around the globe. It is a real problem in California, especially along rivers....

ODA did a pest risk assessment on giant reed in 2007. The conclusion was that giant reed should be placed on our Watch List, but didn't warrant listing as a noxious weed.

We're north of its expected potential range. As a result of that report, giant reed was removed from Oregon's official state noxious weed list and the Oregon Invasive Species Council's list of 100 Most Dangerous Invaders.

So what's the problem? Maybe there isn't one, but PGE is looking into planting many of thousands of acres of giant reed around Boardman to provide an alternate fuel for their coal-fired power plant.

It is an intriguing idea, but such large plantings were never contemplated during the risk assessment process.

Converting a coal plant to a sustainable, locally grown fuel would be a good thing – unless it escapes, adapts, and becomes a noxious weed ala California. It is time for us to take another look. "

http://oregoninvasivespecies.blogspot.com/2010/10/second-look-at-giant-reed-and-brown.html

On the federal level, A. donax has been assessed as a plant posing a significant risk to the environment. That geographic area includes all of Oregon, per p.4.

http://www.whitehouse.gov/sites/default/files/omb/assets/oira_2060/2060_10052012-4.pdf

There is great pressure on entities such as ODA to permit commercial use or Arundo donax and other invasive species. Commercial interests are still pressing for the issuance of a Federal Renewable Identificaton Number (RIN) which would allow for industrial scale planting.

http://www.renewableenergyworld.com/rea/news/article/2013/04/arundo-is-better-than-switchgrass-for-biomass-power-generation

Cost of eradication of A. donax in California has been calculated to be $25,000/acre per p. 9, below.

http://www.nwcb.wa.gov/pdf/Draft_written_findings_arundo_donax_2014%20monitor%20list.pdf

Scalability of bonding is certainly key, as then Representative Dembrow pointed out in the 2013 House hearing before the House Energy and Environment Committee on the Native Plant Society's HB2813.

PGE placed a $1,000,000.00 bond on for its research planting for a relatively small acreage. PGE projects approximately 90,0000 acres of Arundo donax will be needed to to supply the Boardman energy plant. If a small plot requires a million dollar bond, what size bond is required to protect Oregon from tens of thousands of acres planted in widely dispersed fields?

In reviewing the the Secretary of State's archive, the language in the rules (603-052-1207, 603-052-1212, 603-052-1215, 603-052-1080,
603-052-1090) addressing bonding requirements is reminiscent of then Representative Dembrow's line of questioning during the 2013
HB2813 hearing regarding financial responsibility in any future industrial scale plantings of Arundo donax.

Thank you so very much for your consideration in this crucial matter.

Billy Don Robinson
State Vice-president,
Legislative Committee, Chair
Native Plant Society of Oregon

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