Dear trustees of the public interest,

The under-signed scientists and scholars address some of the public policy questions surrounding wolf conservation under the Endangered Species Act (ESA). Another group of scientists recently (11/18/15) publicized a letter, concluding that wolves in the Great Lakes region ought to be delisted. That letter, which we refer to as Mech et al., is based on a misunderstanding of three points of law and scientific evidence: (1) public attitudes about wolves and the ESA, (2) adequacy of management by the states, and (3) legal requirements of the ESA. We explain the misunderstandings with evidence to support each of our claims. We conclude wolves should still be protected under the ESA.

1. The science of public attitudes

Data indicate that the vast majority of the U.S. public holds positive attitudes toward wolves and support the ESA ¹. Contrary to the assertions of Mech et al., existing evidence does not support the claim that keeping wolves on the ESA "creates public resentments towards the species and the ESA". This claim is asserted without any supporting evidence, and runs exactly contrary to the scientific evidence. Long-term data suggest that removal of ESA protections led to lower tolerance for wolves in Wisconsin². The best available science also indicates that the general public is more tolerant of wolves than is commonly assumed. Indeed, recent polling data confirm that there is strong support for both wolves and the ESA nationally. Indeed support for wolves has actually increased substantially over the past three and a half decades ¹. Views to the contrary are fueled primarily by special interest groups that are vocal, but small in number. Mech et al. further imply, and the U.S. Fish and Wildlife Service (FWS) has said ³, that social intolerance prevents wolves, at this time, from occupying more habitat than they currently occupy. Bruskotter and colleagues offer important evidence to the contrary 4. More likely, a significant threat to recovery in recent years is legal killing that is implemented by the states and sanctioned by the FWS. No less important, the purpose of the ESA is to mitigate threats to recovery. Consequently, insomuch as wolves are not legally recovered (see next section of this letter), then a great threat to achieving recovery is current lethal management, not intolerance by citizens.

2. The science surrounding the adequacy of state management

A 2011 Presidential Order mandated, "Our regulatory system...must be based on the best available science." 5. The ESA requires adequacy of existing regulatory mechanisms before delisting an endangered species (Sec. 4(a)(1)(D)).

Mech et al. assert, "adequate regulatory mechanisms for wolf management are in place in the western Great Lakes states", without providing supporting evidence. Their statement also ignores substantial criticisms of state regulation. There are two scientific concerns about the adequacy of state regulatory mechanisms to protect wolves. First, several teams of scientists have questioned the sustainability and science behind existing wolf-hunting plans ^{6,7,8}. Second, the methods Wisconsin used to count wolves have been questioned on scientific grounds of accuracy and bias 9. Adding to scientific concerns, the federal court questioned the existing regulatory mechanisms in Minnesota and states in the region without wolf management plans 10. That court found "virtually no controls exist under the Minnesota plan on the killing of wolves in two-thirds of the state..." (p. 106). Taken together, the scientific evidence and the legal requirements both point to inadequacy of existing regulatory mechanisms to ensure the persistence of wolves in the region.

3. Legal requirements of the Endangered Species Act

Mech et al. argue that delisting has become "nearly impossible" due to "litigation typically based on legal technicalities rather than biology." Their view is a profound misrepresentation.

The FWS attempted and failed to delist wolves, not because of legal technicalities, but because the biological status and management of wolves do not meet standards required by the ESA. One of the most important gaps pertains to the inadequacy of existing regulatory mechanisms (see previous section of this letter). A second fundamental gap is the legal definition of endangerment (ESA Sec. 4(a)(1)). Quite simply, wolves still fit the legal definition of endangerment in the Great Lakes region and nationwide. These views are supported by published evidence, repeated judicial opinion, and congressional intent, as explained in numerous peer-reviewed articles ¹¹.

Mech et al. advocate for Congress to sidestep the ESA and the current federal Court of Appeals (their footnote 2). We disagree because such action does not serve the broad public interest in safeguarding public trust assets, such as wolves.

For the above reasons, wolves in the Great Lakes region should remain protected under the ESA at this time and until the legal requirements for delisting are met. Delisting is possible, if and when the FWS uses the best available science that justifies delisting. Currently it does not.

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Endnotes referenced in the main text

Two recent polls and a 2014 scientific survey found 79–90% support for the ESA nationwide; opposition ranged from 7-13% in these studies. These results are very similar to a study conducted in mid-1990s that found approximately 16% of U.S. residents opposed the ESA" (Czech & Krausman 1999. Society & Natural Resources 12, 469-479). In a study led by Dr. Jeremy Bruskotter, researchers examined if support for the ESA was lower in states where the FWS has attempted to recover wolves. Results showed that support/opposition to the ESA did not vary regionally. Approximately 9% of residents of Great Lakes region states oppose the ESA, as did 9% of residents of the rest of the country (data available upon request). Moreover, these researchers found that the proportion of adult US residents expressing positive attitudes toward wolves *increased* by 42% in the U.S.A. since the late 1970s --from 0.43 in 1978 to 0.61 in 2014 (data available from author). Taken together, these data convincingly demonstrate that (a) opposition to the ESA has *not* increased over the last three decades, (b) opposition to the ESA is *not* greater in regions where the FWS has attempted to recover wolves, and (c) attitudes toward wolves have actually improved nationwide over the past three and a half decades.

² In 2013, Adrian Treves and colleagues suggested the possibility that declining tolerance for wolves among Wisconsin residents of wolf range was due to dissatisfaction with ESA protections among many other possible causes. Subsequent work by Jamie Hogberg and colleagues does not support Mech et al.'s idea that "ESA protections create public resentment for wolves". Rather they found a significant decline in tolerance for wolves among men in wolf range after Wisconsin regained authority for delisted wolves and the state began hunting wolves. Therefore the leading hypothesis is that tolerance declined because wolves were deemed less valuable. See peer-reviewed papers above at http://faculty.nelson.wisc.edu/treves/pubs/Hogberg_Treves_Shaw_Naughton-Treves_2015.pdf

³ Removing the Gray Wolf (Canis lupus) From the List of Endangered and Threatened Wildlife and Maintaining Protections for the Mexican Wolf (Canis lupus baileyi) by Listing It as Endangered, 78 Federal Register 35664 (proposed June 13, 2013) (to be codified at 50 C.F.R. Part 17).

⁴ Jeremy Bruskotter and colleagues examined the legal and scientific basis for the FWS' 2013 proposed rule to delist gray wolves nationwide (Bruskotter et al. 2013. Conservation Letters 7:401-407, see http://faculty.nelson.wisc.edu/treves/pubs/Bruskotter Vucetich Enzler Treves Nelson 2013.pdf).

5 Obama B. 2011. Presidential Documents: Improving Regulation and Regulatory Review. Federal Register 76: 3821-3823.

⁶ Vucetich JA. 2012. Appendix: The influence of anthropogenic mortality on wolf population dynamics with special reference to Creel & Rotella (2010) and Gude et al. (2011) in the "Final peer review of four documents amending and clarifying the Wyoming gray wolf management plan". Federal Register Part 17; 50: 78-95 see http://www.fws.gov/mountain-prairie/species/mammals/wolf/WY Wolf Peer Review of Revised Statutes and Plan Addendumt2012 0508.pdf

John Vucetich and colleagues evaluated the scientific soundness of plans for harvesting wolves to manage depredations in Michigan. The document is in a Little River Band of Ottawa Indians Natural Resources Report. http://faculty.nelson.wisc.edu/treves/reports/wolf hunting and depredation 29Aug2013.pdf.

Adrian Treves and colleagues sent an open letter to the USFWS in 2014, describing concerns about use of the best available science in the State of Wisconsin's post-delisting monitoring report on gray wolves.
http://faculty.nelson.wisc.edu/treves/reports/Letter%20to%20USFWS/Response to Acting Director Wooley USFWS.pdf

⁹ The governments of 22 countries recognize a legal obligation to the broad public interest in preserving predators and regulating their exploitation as trust assets for the benefit of current and future generations. Adrian Treves and colleagues reviewed why that public trust duty has been neglected because narrow, special interests that favor hunting and culling predators have captured many government wildlife agencies and the science they use to manage predators. Wisconsin is presented as a case study of neglect of the wildlife trust. See Appendix S2 in Treves et al .2015. Predators and the public trust. Biological Reviews *DOI: 10.1111/brv.12227*, and online at http://faculty.nelson.wisc.edu/treves/pubs/Predators-and-the-public-trust.pdf

¹⁰ The 111-page decision by a Federal court to relist gray wolves in the Western Great Lakes region. HSUS et al. v. Jewell et al. 2014. U.S. District Court, D.C. (1:13-cv-00186-BAH Document 52).

¹¹ The peer-reviewed scholarship, that supports these claims about the legal meaning of endangerment, including reviews of Congressional intent and judicial opinion, includes: Carroll et al. (2010) Conservation Biology 24, 395-403; Enzler & Bruskotter (2009) Virginia Environmental Law Journal 27, 1-65; Greenwald (2009) Conservation Biology 23, 1374-1377; Kamel (2010) Ecology Law Quarterly 37, 525-561; Tadano (2007) Washington Law Review 82,795; Vucetich, et al. (2006) Conservation Biology 20, 1383-1390. A review of these ideas in the specific context of wolf endangerment is found in the sources cited in endnotes 4 and 9 above.