



The precarious position of wildlife conservation funding in the United States

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ABSTRACT

The Pittman-Robertson Act was established in 1937 to fund state-based wildlife conservation through an existing excise tax on sporting arms and ammunition. Because these items were purchased mostly by hunters at the time, they were the user group primarily funding wildlife conservation. Subsequent amendments to Pittman-Robertson expanded the taxable items to include pistols, revolvers, and archery equipment, effectively broadening the pool of conservation funding contributors to include non-hunters. The continuing trends of declining hunting participation, increasing handgun sales for non-hunting purposes, and increasing sport shooting and target archery independent of hunting, mean that non-hunters are contributing a disproportionately greater amount to Pittman-Robertson funding than hunters, and therefore contributing more to wildlife conservation. The evolving sources of revenue to Pittman-Robertson pose several threats to this historically important source of conservation funding. Addressing them may require new funding coalitions and outreach describing the conservation benefits and outcomes of Pittman-Robertson funding.

KEYWORDS

Pittman-Robertson Act; hunting; sport shooting; archery; conservation funding

Introduction

Enacted in 1937, the Federal Aid in Wildlife Restoration Act – commonly known as the Pittman-Robertson Act for the legislators who sponsored it – created a funding mechanism for wildlife conservation through an existing excise tax on sporting arms (sporting arms are defined as long guns, pistols, and revolvers except those used in military and law enforcement) and ammunition (16 U.S.C. 669–669i, 50 Stat. 917; Organ, 2018). Revenues from the excise tax are apportioned to fish and wildlife agencies in all 50 states and five major territories annually through a formula that accounts for the state's land area and hunting license sales.

Since the passage of the Act, the Pittman-Robertson excise tax has generated almost \$19 billion for species restoration, habitat improvements, wildlife research, and other conservation work carried out by the individual fish and wildlife agencies (U.S. Fish and Wildlife Service, 2020a). Between 2015 and 2019 alone, an average annual total of \$606 million was apportioned to states through the Wildlife Restoration Trust Fund (Congressional Research Service, 2019). These apportionments have made possible the recovery of once-imperiled

wildlife species, including the white-tailed deer (*Odocoileus virginianus*), the wild turkey (*Meleagris gallopavo*), and the Rocky Mountain elk (*Cervus elaphus nelsoni*). The apportionments have also aided in the recovery of mammal and bird species listed under the U.S. Endangered Species Act of 1973, such as the bald eagle (*Haliaeetus leucocephalus*), peregrine falcon (*Falco peregrinus*), and Canada lynx (*Lynx canadensis*). Pittman-Robertson also helps pay for habitat protection that benefits all species, not just hunted ones, and wildlife research and conservation efforts.

The initial Pittman-Robertson funding model was based on the belief that federal action was needed for restoration of wildlife decimated by habitat loss and degradation. The excise tax originally applied only to sporting arms and ammunition. People purchasing these taxable items at the time of Pittman-Robertson's enactment were believed to be hunters (U.S. Fish and Wildlife Service, 1961; Williamson, 1987); it was logical for hunters to pay for wildlife conservation efforts. This rationale held true for decades. However, subsequent amendments to Pittman-Robertson expanded the taxable items to include pistols, revolvers, and archery equipment. These changes effectively broadened the pool of wildlife conservation funding contributors to include sport shooters (sport shooting is defined as a legal shooting activity other than for hunting, law enforcement, or military purposes, such as target shooting), archers, and those purchasing firearms and ammunition for self-defense or protection purposes. The population of people who purchase but do not regularly use firearms and ammunition is estimated to be as much as 48% (Pew Research Center, 2017). Regular users of equipment taxed through Pittman-Robertson, meanwhile, comprise three groups: those who *only* hunt, those who hunt *and* sport shoot (whether with firearms, archery equipment, or both), and those who *only* sport shoot.

In recent decades, participation in hunting has declined while participation in sport shooting has risen; as a result, the proportions of the groups helping to fund wildlife conservation have seen a corresponding shift. At the heart of these changes lies a simple but critical dilemma: a growing segment of the Pittman-Robertson funding base does not hunt, and may be less familiar with and supportive of the need to fund state wildlife conservation work.

Rise in Sport Shooting, Decline in Hunting, and Maintenance of Conservation

Since 2008, sport shooting in America has grown considerably, just as hunting has continued to decline (Responsive Management, 2019; U.S. Fish and Wildlife Service & U.S. Census Bureau, 2016). In a recent study of sport shooting participation trends for the National Shooting Sports Foundation (NSSF), Responsive Management (2019) found that 22% of Americans, or an estimated 52.1 million adults, went sport shooting in 2018. This rate was a sharp increase from 2009, when just 15% of American adults sport shot.

In addition to participating in the shooting sports and visiting ranges in greater numbers, Americans have also been purchasing more firearms over the last decade. Recent data from the FBI National Instant Criminal Background Check System (NICS), a widely used industry proxy for firearms sales, show a steady increase in point-of-sale background checks since 2006 (Federal Bureau of Investigation, 2021).

But just as sport shooting and firearms sales have increased on the national level, participation in hunting has been declining. The U.S. Fish and Wildlife Service's National Survey of Fishing, Hunting, and Wildlife-Associated Recreation reported 11.5 million

hunters in 2016, down from 13.7 million in 2011 and 12.5 million in 2006 (U.S. Fish and Wildlife Service & U.S. Census Bureau, 2016). National hunting license sales data maintained by the U.S. Fish and Wildlife Service show a similar steady downward trend over the last few decades (U.S. Fish and Wildlife Service, 2020a), although an increase in license sales occurred during 2020, presumably due to the Covid-19 pandemic.

Steady firearms sales in recent years (no doubt helped by the increasing number of Americans going sport shooting as well as those purchasing for other reasons such as self-defense) have generated substantial excise tax revenues for the Wildlife Restoration Trust Fund, allowing fish and wildlife agencies to continue existing conservation programs for the nation's wildlife and their habitat, despite declines in license revenues used to match Pittman-Robertson funds. In some recent years, the amount of money distributed to states for these purposes has increased. For example, in 2016, more than \$787 million in excise tax revenues was apportioned to the states, up from \$708 million the previous year (U.S. Fish and Wildlife Service, 2020b). This trend may continue, as industry reporting suggests that concerns related to the 2020 Covid-19 pandemic have led more Americans to buy their first gun (National Shooting Sports Foundation, 2020).

Shifting Contributors to Wildlife Conservation

While the revenues generated through Pittman-Robertson have held steady or even increased, the characteristics of regular users of equipment taxed through Pittman-Robertson have shifted and are likely to continue to shift. Among all sport shooting participants in 2018, more than half (53%) went sport shooting but did *not* hunt. The segment of people who hunt *exclusive* of sport shooting has declined since 2012, going from 24% in that year to 12% in 2018. At the same time, the segment of people who sport shoot *without* hunting has grown steadily over the same period, rising from 39% in 2012 to 53% in 2018 (Responsive Management, 2019).

The recent influx of new, demographically different sport shooters is changing the sport shooting population itself. Specifically, Responsive Management (2019) found that new sport shooters, compared to established sport shooters, were more likely to be from an urban area, more likely to be female, more likely to be nonwhite, and more likely to be younger; they were also *less* likely to hunt. New sport shooters today also name self-defense as one of their top reasons for going sport shooting. Among new shooters, this motivation is more important than shooting for the sport or recreation or shooting to practice for hunting.

The proportions of revenue coming from the major categories of hunting and shooting items taxable through Pittman-Robertson are also illuminating. An analysis of the revenues attributable to ammunition, long guns, pistols and revolvers, and archery equipment between 2007 and 2016 indicates that, for each year, ammunition and pistols and revolvers together generate most of the revenue (Congressional Research Service, 2019). Pistols and revolvers, of course, are far more often used for self-defense and sport shooting activities than for hunting. The varying use of ammunition by hunters and sport shooters is also important to consider. Whereas the average hunter may use only a handful of rounds to sight in a firearm and harvest game during the season, it is not unusual for a sport shooter to cycle through tens or even hundreds of rounds of ammunition during a single outing to the range. Separating Pittman-Robertson excise tax revenues by purchases for hunting- or non-

hunting-related purposes indicates that 22% of all firearms (including long guns, pistols, and revolvers) and ammunition sales are for hunting purposes, with the remainder (78%) being for non-hunting purposes (Southwick Associates, 2017).

While hunters contribute to conservation in ways that non-hunting sport shooters generally do not (e.g., license and permit fees; organizational membership, banquet and raffle expenditures, and in-kind volunteer contributions), the sheer difference in the number of hunters and non-hunting sport shooters means the latter are likely contributing a disproportionately greater amount to Pittman-Robertson funding, and therefore to wildlife conservation.

The makeup of the archery population has also shifted over the last decade in a way that mirrors the changing hunting and sport shooting population. Specifically, the ratio of non-hunting archers to bowhunters has grown, with the characteristics of non-hunting archers mirroring those of non-hunting sport shooters in several ways (Responsive Management, 2016a). For instance, whereas bowhunters are overwhelmingly male, almost half of those who *only* practice target archery are female. Bowhunters, compared to target archers, have a greater percentage of individuals living in rural areas. Target archers, relative to bowhunters, have a greater percentage of individuals with a bachelor's degree or higher. Finally, bowhunters tend to be older than target archers.

Implications of the Shift in Wildlife Restoration Fund Contributors

Declining hunting participation and increasing target and sport shooting participation (both with firearms and archery equipment) mean that non-hunters are helping to fund wildlife conservation in the United States at increasingly higher rates. There are several major implications to this. First, non-hunting sport shooters and archers may not care as much about the public benefit of wildlife conservation created by taxes on their equipment (Responsive Management et al., 2021). Wildlife conservation is highly relevant for hunters (Duda et al., 2010). But for non-hunting sport shooters, archers, and firearms owners, the case for why excise taxes on firearms, ammunition, and archery equipment should be used to manage and support wildlife may not be as obvious or relevant. It may be difficult to make this case to non-hunting shooters and archers who do not have convenient access to a shooting range: in their eyes, a better use of the excise tax revenues might be more projects to facilitate this access.

Past efforts to educate people with basic information about the United States conservation funding structure have had mixed success (e.g., U.S. Fish and Wildlife Service, 1987): while many hunters are supportive of the Pittman-Robertson excise tax after learning about it and the programs it supports, non-awareness, apathy, and misunderstanding have been persistent hurdles among the wider public. Educating non-hunters about Pittman-Robertson means conveying a complicated message in a way that generates widespread support – no easy task. Yet failing to even attempt to educate non-hunters about Pittman-Robertson creates a potentially damaging scenario in which the conservation community braces for an uncertain impact as it waits for the public to recognize the funding disconnect.

Second, non-hunting sport shooters and archers may want their contributions to Pittman-Robertson funds to be used on shooting and archery ranges instead of wildlife management. A non-hunting sport shooter or archer who has few public shooting facilities nearby might be justified in feeling that revenues from an excise tax on firearms and

ammunition ought to be used to fund accessible recreational shooting and archery opportunities, rather than the management of habitat for a species they are unlikely to encounter. Fortunately for wildlife conservation funding, obligations to non-hunting sport shooters and archers along these lines have been partly addressed through amendments to Pittman-Robertson allowing for a portion of the excise tax revenues to be used for the construction, operation, and maintenance of public target ranges (this latter allocation is part of Pittman-Robertson's Basic Hunter Education and Safety Program). In a similar manner, the Sport Fish Restoration Program (SFR) invests funds from excise taxes on fishing tackle, boats, motors, and gasoline on boating access, boating safety, coastal wetlands restoration, and other activities that are of value to the non-fishing boater. At the same time, fish and wildlife agencies and the conservation community must determine their role in providing sport shooting opportunities. Does sport shooting represent a means to an end in terms of securing stable and reliable conservation funding, or does increased attention on sport shooting mean the sacrifice of time and effort spent on wildlife resource issues (i.e., the actual mandate of the agencies)?

Perhaps most troubling, legislators may use trends in Pittman-Robertson excise tax-payers as a pretense to redirect revenues from the Wildlife Restoration Trust Fund to address public health and safety issues. Such proposals have materialized before; for example, as early as 1982, a recommendation from the President's Task Force on Victims of Crime would have reduced Pittman-Robertson funding by 25% annually by diverting the excise tax on handguns to a Victim's Assistance Fund, and legislation a decade later would have redirected a portion of the Pittman-Robertson excise taxes on firearms to a health care fund for victims of gun violence.

Further partitioning of Pittman-Robertson funds or, more alarmingly, reallocating them to other unrelated activities, could significantly destabilize the funding base of wildlife conservation in America, as no other comparable federal mechanism exists to ensure the sustainability of the nation's wildlife. Manufacturers, eager to maximize their own profits, might lobby for a reduction or complete elimination of the excise tax. Even lowering the excise tax percentage for the various items to a rate directly associated with hunting purposes (for example, from 10% down to 5%) would still prove disastrous for conservation funding.

There are other compelling reasons to protect Pittman-Robertson, especially the multitude of social and economic benefits that come from having healthy wildlife populations in the United States. Pittman-Robertson stands as an historical achievement not just because of the tangible evidence of America's wildlife, but because of the diversity of interests whose support made the program possible. Passage of the Federal Aid in Wildlife Restoration Act depended on cooperation between the federal government, the states, private conservation organizations, industry, and individual hunter/conservationists – that such interests would come together over a tax is rare. Even today, there are continuing efforts by the hunter-conservationist community and industry to reinforce Pittman-Robertson funding. For example, a recent proposal supported by the American Suppressor Association, an industry trade group, would add a 10% excise tax to suppressors in exchange for a reduction in regulations on the sale of suppressors by removing them from the National Firearms Act (K. Williams & B. Miller, personal communication, March 4, 2021). The net effect of these proposed changes would be substantially increased funding for Pittman-Robertson. Hunters themselves make up an important political constituency, and their support for

the firearms industry could diminish if the latter agreed to a reduction or elimination of excise taxes used to benefit wildlife. Those who would seek to alter or dismantle the current Pittman-Robertson funding structure have an obligation to address these arguments for preserving the program as is.

Looking to the Future

When enacted in 1937, the Pittman-Robertson Act was an innovative and unique funding model developed by a relatively small group of leaders in the hunting community, designed to address the nearly complete lack of funding for wildlife conservation. Since then, there has been a proliferation of organizations created to support wildlife conservation (e.g., Ducks Unlimited in 1937, National Wild Turkey Federation in 1973, Pheasants Forever in 1982) and they are actively involved in recent efforts to support and strengthen Pittman-Robertson. There has also been substantial growth in other conservation funding programs either designed to address wildlife conservation or to provide ancillary but substantial conservation benefits (e.g., various Farm Bill provisions, wetlands protection legislation). Despite these funding options and the dramatic recovery of several prominent species (e.g., turkey, white-tailed deer), the vast majority of wildlife populations in the United States continue to decline, particularly non-hunted species. Pittman-Robertson alone provides insufficient funds to address the full breadth of funding needs for wildlife conservation programs. The challenges faced by Pittman-Robertson suggest the extent to which this vital source of funding is vulnerable. As a result, it is becoming increasingly critical for the wildlife conservation community to support an effective and responsive Pittman-Robertson program. The community could also embrace a portfolio approach that diversifies funding sources and fully takes advantage of all available opportunities to utilize existing or future funding programs for wildlife conservation purposes, even if the programs' original intent may not have included wildlife conservation benefits.

An excellent example of an innovative effort to address the broader wildlife conservation funding need is the Blue Ribbon Panel, a consortium of conservation and business interests (including representatives from the Association of Fish and Wildlife Agencies and the Wildlife Management Institute) that was convened in 2014 to identify feasible additional funding mechanisms for wildlife conservation, including for nongame wildlife. The Panel's top recommendation was to redirect \$1.3 billion (or roughly 10%) annually of existing federal royalties on energy and mineral development to fish and wildlife conservation. This recommendation was at the center of the Recovering America's Wildlife Act (RAWA), an amended version of which called for the alternative conservation funding to come from general treasury funds rather than from energy revenues.

Another recommendation from the Blue Ribbon Panel stems from the reality that wildlife conservation benefits *all* Americans, not just those who participate in hunting, sport shooting, or other wildlife-related activities. Accordingly, the Panel recommended that fish and wildlife agencies across the United States develop programs, produce outreach, and take other steps to reinforce their relevance to *all* U.S. citizens. Reinforcing the relevance of fish and wildlife agencies is one of the most important ways to encourage a wider funding base for conservation into the future (Decker et al., 2017; Jacobson et al., 2010; Jacobson & Decker, 2006). A number of states have successfully introduced alternative funding mechanisms to help pay for conservation. For example, Missouri voters

approved a constitutional amendment in 1976 to create a one-eighth of one-percent conservation sales tax, with the revenues used to fund the work of the Missouri Department of Conservation (Jacobson et al., 2010). Voters in Arkansas passed a similar conservation sales tax in 1996, resulting in additional funding for four state agencies including the Arkansas Game and Fish Commission. At least 10 other states have passed similar alternative funding measures thanks to popular support from both the hunting and non-hunting segments of the electorate. Despite these successes, surveys have detected no consistent pattern in Americans' attitudes toward alternative funding sources, which tend to vary based on geography and the prevailing political sentiments of the moment (Responsive Management, 2013, 2016b, 2018a, 2018b).

In a similar manner, the future of the Pittman-Robertson program may depend on creative thinking and forceful action by the wildlife conservation community. Congress passed the Modernizing the Pittman-Robertson Fund for Tomorrow's Needs Act (known as the Pittman-Robertson Modernization Act) in December 2019. This legislation recognizes the importance of hunters to wildlife conservation by allowing Pittman-Robertson funds to directly support efforts to recruit, retain, and reactivate hunters and sport shooters (known as R3). Influxes of new hunting and shooting participants mean increases in the excise tax revenues available for wildlife and habitat management. However, R3 is a costly and time-consuming endeavor, with participation gains requiring substantial agency and nongovernmental resources. The Sport Fish Restoration Program may provide some additional guidance for embracing user groups who contribute to the excise taxes but are not direct beneficiaries of fisheries conservation programs. In the SFR Program, only 57% of funds are directed to sport fish restoration activities while other portions support coastal wetlands (19%); recreational boating safety (19%); boat access; clean vessel and related activities (4%); and outreach (2%). This portfolio of benefits accrues value to the broader boating and fishing community, not just anglers, as a reflection of the diverse contributors to the fund.

It is unlikely that revenues from the Pittman-Robertson excise tax will increase indefinitely. Despite a recent uptick in firearm sales, purchases will likely eventually return to pre-surge levels or perhaps even decrease significantly. When this happens, there is no guarantee that the shortfall will be made up by sales of ammunition, archery equipment, or other items subject to the excise tax.

One approach to a more sustainable model for wildlife conservation funding would seem to be a smoothly functioning Pittman-Robertson system with the full support of both hunters and non-hunting shooters and archers, combined with an inflow of new funding through RAWA or other alternative mechanisms. The latter is far from assured, however, as securing general funds is extremely competitive. Yet there remains a need for coordinated outreach and education communicating both our collective obligations to the nation's wildlife resources and the precarious nature of wildlife conservation funding in the United States today.

Reinforcing the relevance of fish and wildlife conservation and building subsequent support for conservation agencies is a critical component of this; so is getting more Americans involved in the outdoors. As more people can take part in wildlife-related experiences and activities, there will be greater appreciation of the fact that, for decades, the conservation community has been able to accomplish an enormous amount for everyone on the backs of a relative few. This underscores the importance of funding mechanisms that depend on support from all Americans, not just hunters (Jacobson et al., 2010;

Jacobson & Decker, 2006). The conservation community may need to prepare for a future in which wildlife management depends less on license sales and Pittman-Robertson excise tax revenues. This means considering new funding coalitions, particularly those involving non-hunting wildlife advocates; conservation in the United States will increasingly rely on strong bridges between hunters and non-hunters.

Uncertainty remains relative to the implications of the shift in the participatory and demographic characteristics of those contributing to the Pittman-Robertson fund, as well as the implications of shifting funding away toward the interests of sport shooters. Human dimensions research can aid in reducing this uncertainty by measuring the attitudes and norms of firearms and ammunition purchasers who are not active hunters or sport shooters; quantifying the impact on traditional wildlife restoration projects under different scenarios of funding being allocated to sport shooting interests; and understanding what messages will best resonate with the general public regarding the need for comprehensive wildlife conservation funding that is not tied to a particular user base. In the end, Pittman-Robertson, RAWA, R3 efforts, and broader funding streams are all means to the common end of conserving America's wildlife populations and the habitats on which they depend.

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