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**Walking Like a Duck:
The Wildlife Diversity Funding Initiative**

Susan J. Buck
Department of Political Science
University of North Carolina-Greensboro
Greensboro, NC 27412 USA
phone: 910-334-5144
e-mail: BUCKSJ@IRIS.UNCG.EDU

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Abstract

In 1996, a wide coalition of interest groups, fish and wildlife agencies, and some industries proposed a new federal excise tax on selected wildlife-associated recreation equipment and supplies. This proposal, known as the Wildlife Diversity Funding Initiative (WDFI), is intended to provide federal funds for state nongame species and habitat conservation. It is modelled after successful funding programs for game and sportfish restoration. However, the game and sportfish programs are successful because of remarkable congruence between costs borne by hunters and fishers and benefits received by the same group. They are strongly supported by industry, and the agencies which administer the funds are deeply involved with the user group, which has considerable input into management decisions. However, the situation variables for the successful programs are not duplicated in the WDFI. The WDFI does not charge costs to the resource users that are clearly balanced by benefits; it does not have industry support, and the resource users are not direct participants in the rulemaking procedures which affect the resource.

Summary

Since the early 1900s, state fish and wildlife agencies have focused on improving opportunities for recreational hunting and fishing. By the mid-1970s, there was general agreement that nongame species also need specialized management. In 1980, Congress passed the Fish and Wildlife Conservation (Forsythe-Chafee or Nongame) Act, but although the act was reauthorized in 1986 and 1990, it has never been funded. In the early 1990s, a coalition of wildlife interest groups, professional associations, and the U. S. Fish and Wildlife Service (FWS) initiated a campaign to provide funding for the Nongame Act. The campaign, known as the Wildlife Diversity Funding Initiative (WDFI), proposes a funding mechanism modelled on two extremely successful programs also administered by the FWS: Federal Aid in Wildlife Restoration (Pittman-Robertson or P-R) Act of 1937, and Federal Aid in Sport Fish Restoration (Dingell-Johnson or D-J) Act of 1950. The basic funding mechanism used in these two laws is a federal excise tax on hunting and fishing equipment which is redistributed to the states for wildlife and sportfish programs. The WDFI proposes a similar tax on nonconsumptive wildlife-related recreational supplies such as binoculars, bird seed, and tents.

The two existing programs are successful for several reasons: remarkable congruence between users and payers; strong support from industries, governments, and the private sector involved with the resource; user access to the agencies and commissions that manage the resource; and no active opposition to the programs. These conditions do not exist for the funding mechanism proposed by the WDFI. The rationale for the WDFI proposal rests on two arguments: first, that P-R and D-J programs are inadequate because they neglect nongame species, and second, on the principle of "user pays," participants in nonconsumptive wildlife-related recreation should be taxed to support their activities.

The WDFI is an example of well-intentioned, wooly thinking. First, it ignores the social context of P-R and D-J programs, using a false analogy to apply P-R and D-J funding mechanisms and outputs to current demands for ecosystem management, sustainability, and biodiversity protection. Second, empirical evidence does not support the WDFI contention that P-R and D-J are neglecting nongame species or that the proposed tax would primarily affect the nonconsumptive users who would benefit. Finally, institutional analysis suggests that even if such a mechanism were in place, it would not be enduring.

I begin this paper with a brief description of the P-R and D-J programs and the proposed WDFI. In the second part, I discuss three problems which proponents of the WDFI will face: lack of industry support, lack of fiscal equivalence, and an unstable institutional design. I conclude that the WDFI--as currently designed and promoted--is not an appropriate mechanism for meeting the urgent needs of nongame and diversity programs.

Introduction

In the early days of the twentieth century, few disputed the need to provide protection for some forms of wildlife. Species which are abundant today, such as eastern white-tailed deer and wild turkey, were on the brink of extinction; some, such as the passenger pigeon, slipped over the brink and were lost forever. The interest groups concerned at that time with wildlife were fairly clearly defined: market hunters, sportsmen, and conservationists (Tober 1981). State governments were unable to forge successful policies to protect even the species which remained largely within their own borders; migratory species were less amenable to protection.

The inability of the states to provide sustainable game resources stemmed from many factors. First, game seemed so plentiful that many were unconvinced of the problem or, if convinced, refused to accept that diminishing numbers were the result of indiscriminate hunting. We see this denial at the end of the twentieth century as well, with fishermen on both coasts refusing to accept that overfishing is a major cause of declining fish stocks. Second, local custom dating to colonial times endorsed unrestricted hunting; vestiges of this attitude remain in state laws that assume private land is open to hunting unless it is posted. Third, since wealthy sportsmen often brought substantial business into rural areas, rural-dominated legislatures were understandably reluctant to cut off the income supply by restricting hunting. Fourth, states which shared both migratory stocks and borders frequently suffered long-standing and often violent disputes over resources and had little incentive to join multi-state compacts. Such compacts would, in any case, require congressional approval, and states were reluctant to involve Congress in their internal affairs. Finally, there was no established professional class of administrators for wildlife. Gifford Pinchot, the first head of the United States Forest Service, had to travel to Germany to train as a forester because there were no American forestry schools. The Pendleton Act, passed in 1887, initiated a professional civil service corps at the federal level, but most states lagged far behind. State governments were so far from professional game management that in many states the sportsmen's clubs and conservation groups such as the fledgling Audubon Society paid private detectives to enforce the game laws (Orr 1992; Tober 1981, 215-216). Not surprising, most enforcement was directed against market hunters, who were from a completely different social class and whose activities often reduced the game available for sportsmen.

By 1920 the states had lost their absolute control over wildlife (Missouri v. Holland, 252 U.S. 416 [1920]). Ironically, by then many of the obstacles which had prevented effective state game management were overcome. The states and the national government quietly moved from dual federalism, characteristic of the Progressive Era, into the period of cooperative federalism spawned by the Great Depression. One sterling example of cooperative federalism is the Federal Aid in Wildlife Restoration Act of 1937.

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Pittman-Robertson Act of 1937

In the 1930s, a happy convergence of dedicated sportsmen, gun and ammunition manufacturers, conservationists, and congressmen achieved passage of the Federal Aid in Wildlife Restoration Act of 1937, usually known as Pittman-Robertson (or P-R) after its congressional sponsors.¹ The mechanics of Pittman-Robertson are fairly straightforward. Federal excise taxes are collected on firearms, ammunition, and archery equipment (11%) and on handguns (10%) at the manufacturer or wholesale level. The full amount of the excise tax receipts are automatically appropriated to FWS in the fiscal year following their collection. FWS then makes the funds available to the states through an equitable formula: one-half of the fund is distributed based on the ratio of the land area of the state to the total area of the country, while the second half is distributed based on the ratio of the number of paid hunting license holder per state to license holders nationwide. As a condition of eligibility for federal funds, the law prohibits diverting state hunting license fees from state fish and game agencies. State grants are limited to a maximum of 5% and minimum of 0.5% of any one year's total appropriation. The federal-state match for Pittman-Robertson is 75-25 for each project. The FWS is limited to a maximum of 8% of total revenues for administrative costs. Any state allocation which is not used within two years automatically reverts to the Migratory Bird Conservation Fund.

As originally drafted, Pittman-Robertson had enormous potential for federal influence on state wildlife management decisions, but subsequent amendments broadened the discretion of the state decision makers. In 1946, an amendment allowed up to one-fourth of the state's allocation of federal aid funds to be used to maintain completed projects. In the FY 1951 Appropriations Act, Congress gave Pittman-Robertson funds a "permanent-indefinite" appropriations status which automatically transferred the excise tax to the Fish and Wildlife Service. In 1955, Congress passed an amendment which permitted grant funds to be used for straightforward wildlife management (rather than discrete projects). Then in 1970, the law was amended in two important areas. First, the federal excise tax on handguns was added to the Pittman-Robertson supply with half of these revenues apportioned for hunter

¹For the full story of the movement toward Pittman-Robertson, see Restoring America's Wildlife 1937-1987: The First 50 Years of the Federal Aid in Wildlife Restoration (Pittman-Robertson) Act (Washington, DC: USGPO [Department of Interior, United States Fish and Wildlife Service], 1987). Several reviewers of this paper have expressed disbelief that the gun and ammunition manufacturers would support an excise tax on their own products. However, all accounts of the history of P-R agree that such is the case. Given the impoverished condition of hunting stocks and the strong influence of sportsmen's groups such as the Boone and Crockett Club, industry support is easily explained. Once P-R was in place and clearly effective, manufacturers had little incentive to remove the tax. In fact, in 1950 manufacturers, sportsmen, conservation groups, and state agencies joined forces to defeat the repeal of the federal excise tax on arms and ammunition (Williamson, 14).

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safety programs. Second, the 1970 amendment allowed the states to substitute a "comprehensive fish and wildlife resource management" plan for individual project proposals. Finally, in 1972, sales of archery equipment were included in the tax.

Pittman-Robertson has been a resounding success.² Since 1937, over four million acres of land have been purchased for wildlife restoration and another forty million acres are managed under cooperative agreements. Many species, such as elk, wild turkey, wood duck, white-tailed deer, and pronghorn antelope have been restored; some have been brought back from the brink of extinction. Between 1939 and 1993, revenues to the wildlife restoration account totaled \$2,816,543,530; in 1994 the states received \$182,081,113 (Statistical Summary 1994, Tables I-a and V).

Dingell-Johnson Act of 1950

In 1950, the Federal Aid in Sport Fish Restoration Act (Dingell-Johnson or D-J) was passed to provide benefits to the states to enhance non-commercial fisheries. Dingell-Johnson is modelled on the Pittman-Robertson Act. A coalition of fishermen and industry lobbied in favor of an excise tax to be used to mitigate the effects of overfishing, deforestation and siltation, short-sighted agricultural practices, and pollution. The act provides federal grants to the states for sport fish restoration and management; amendments in 1970 and 1984 gave states the option of using the funds for recreational boating facilities and public education projects.

The initial Dingell-Johnson legislation assessed a 10% federal excise tax on fishing rods, reels, creels, and artificial baits, lures, and flies. In 1984, the Wallop-Breaux amendments extended the tax to include additional fishing gear such as tackle boxes and imposed a 3% tax for electric trolling motors and flasher-type sonar fish finders. Import duties on pleasure boats and fishing gear were also added, as was a portion of the tax on gasoline purchased for motorboats. The funds are distributed according to a formula based on geographical area and the proportion of state fishing licenses sold relative to national license sales. Six percent of the federal revenue may be withheld for administration; apportioned funds not spent by the states revert to the federal government after two years to be used for sport fisheries research.

States have used D-J funds to acquire, to manage, and to maintain habitat and hatcheries, to improve access to public waters, for public education, and for research. Between 1952 and 1993, the sport fish restoration account receipts totaled \$2,285,965,110; in 1994 the states received \$174,628,717 (Statistical Summary 1994, Tables I-b and V).

²Many ecologists and conservationists argue that programs to enhance game may actually harm non-game species. However, this is a normative argument which does not subtract from the fact that P-R and D-J have fully satisfied legislative intent.

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The Wildlife Diversity Funding Initiative (WDFI)³

The success of P-R and D-J in financing game and sportfish activities has been the inspiration for nongame program proponents since the early 1970s. In 1976 and again in 1977, bills were introduced in Congress to impose a manufacturers' excise tax on various nonconsumptive wildlife-associated consumer goods; both times the bill fell before pressure from the bird seed and supply industries (Williamson 1985). In 1980, the Fish and Wildlife Conservation (Forsythe-Chafee or Nongame) Act was finally passed, at the cost of removing the excise tax provision. Despite extensions in 1986, 1990, and 1992, the bill has never been funded. Its initial annual funding ceiling of \$5 million has not been raised, and proponents currently estimate minimum annual revenue needs for nongame programs at \$100 million (Doig 1992: 40).

Frustrated by the lack of nongame funding, in 1990 the International Association of Fish and Wildlife Agencies (IAFWA, also known colloquially as *International*) established an ad hoc committee to recommend strategies to obtain funding for the Nongame Act (Doig, 39). Despite the record of industry reluctance to cooperate, the committee recommendations included a funding mechanism which paralleled the P-R and D-J systems. The Wildlife Diversity Funding Initiative (WDFI) has been operationalized in draft legislation entitled the Fish and Wildlife Conservation Enhancement Act. The final plan proposes a federal excise tax on a wide array of products, none of which have been definitively identified because of widespread industry refusal to endorse the program.

Table 1: Partial List of Proposed Products
about here

The particulars of the proposed Fish and Wildlife Conservation Enhancement Act are familiar. States that have approved conservation programs (which all states do as a matter of P-R and D-J eligibility) will be eligible for federal funds up to 75% of the cost of approved state projects. Federal funds will be generated by an excise tax on as yet unidentified items. No more than 6% of the annual appropriation may be used for federal administrative costs. The act prohibits diversion of license fees, stamp revenues, fines, dedicated license plate sales, tax check-offs, and any other conservation-related income from the state conservation agency. The funds are to be allocated to the states by a formula based on state area and population.

³This plan is known by a variety of names which proponents use almost interchangeably: the Wildlife Diversity Funding Initiative (the name used throughout this paper), the Fish and Wildlife Diversity Funding Initiative, Teaming With Wildlife (the name for the national campaign to gather support for the WDFI), and the Fish and Wildlife Conservation Enhancement Act (the proposed legislation to enact the WDFI recommendations).

Table 1: Partial List of Proposed Products

TEAMING WITH WILDLIFE PRODUCT LIST

updated 1/26/95



The following list is a draft of those products being considered for a user fee. Before this list is incorporated into the draft legislation, we are asking companies, customers (users) and coalition members to provide feedback on this list, as well as other details of the proposal. The products listed below would have a graduated user fee of 1/4% - 5% of the manufacturer's price. The user fee must not act as a barrier to a product's sale. Beside each category is a suggested level for the user fee. Feedback from companies and consumers will help determine the final list of products and the percent to apply to each.

OUTDOOR RECREATION EQUIPMENT (5%)

Backpacks
Camping stoves
Camping stove fuel
Camping tarps
Camping utensils (connected/folding)
Canoes
Canteens
Climbing equipment
Compasses
Cooking kits
Dry Bags
Flotation vests (selected classes - not standard life boat vests)
Hiking boots
Hiking staves
Kayaks/ Spray skirts
Mountain bicycles
Outdoor sleeping mats
Skis/ Poles/ Boots (cross-country, downhill, telemark)
Sleeping bags
Snowshoes
Tents
Paddles

Portable water purifiers
Prepacked camp foods
Scuba diving masks/ Snorkels/ Goggles/ Flippers
Snowboards
Stuff sacks
Wet suits/ Air tanks/ Regulators/ Spearguns
Whitewater rafts

BACKYARD AND WILDLIFE PRODUCTS (5%)

Wild bird seed and other wild animal feed (except seed packaged for pet feed)
Wild animal and wild bird feeders such as hummingbird feeders, suet feeders and other types of feeders
Wild bird baths
Wild bird houses, bat houses, squirrel houses and houses constructed for use by other wildlife
Nest platforms for wild birds

BOOKS, VIDEOS, AUDIO (5%)

Field guides to bird identification, nest identification, animal tracks, mammals, fishes, butterflies, insects and other animal groups
"How-to" guides such as wildlife viewing guides, hiking and paddling guides, etc.

Audio tapes of wildlife calls
CD-Rom guides to wildlife and its enjoyment

BINOC, MONOC AND SPOT SCOPES (5%)

Binoculars
Hand lenses
Monoculars
Spotting scopes
Tripods
Window mounts

PHOTOGRAPHIC EQUIPMENT AND SUPPLIES (2-3%)

Cameras
Film
Lenses
Lens filters
Photo disc
Range finders (including those designed for use with photographic cameras and parts thereof)

RECREATIONAL VEHICLES (RV'S) (1/4% - 1/2%, no more than \$100)

Campers/ Motor homes/ Travel trailers

SPORT UTILITY VEHICLES (1/4%, no more than \$100)

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Although preliminary discussions of the WDFI clearly envisioned it as a funding mechanism for the Nongame Act, the draft legislation seems intended to supplant the Nongame Act altogether. The draft legislation differs from the Nongame Act in several important areas. The Nongame Act's first purpose is to assist states in "development, revision, and implementation of conservation plans and programs for nongame fish and wildlife" (16 USC § 2901[1]). The draft legislation language is broader: it would fund projects "principally for the benefit of fish and wildlife that are not fished or hunted [emphasis added]." This could be an important distinction; under this proposed statutory language, it would be possible to use the funds for game and sportfish projects. The Nongame Act sets maximum allowable federal administrative costs at 8% (16 USC §2907); the new proposal allows only 6%. Although both laws follow P-R and D-J with 75-25 matching funds, the Nongame Act has an important provision which is lacking in the new proposal. Under the Nongame Act, cooperative projects between states are eligible for up to 90% federal funds (16 USC §2905). Finally, the 1980 Nongame Act imposes an annual funding ceiling of \$5 million; the proposed legislation naturally has no ceiling because the revenues are tax-based.

Who Benefits? Who Pays?

The title of this paper, "Walking Like a Duck," recalls the saying "If it walks like a duck and quacks like a duck, then it probably is a duck." However, despite good intentions, the WDFI is not a "duck." It is easy to see why nongame interests would look to these two laws for a model for their own funding initiative, but this is a false analogy.

Several critical conditions that underlie the success of P-R and D-J are not duplicated in the WDFI: industry support, fiscal equivalence, and an enduring institutional design.

Industry Support

Support from the industries subject to the tax is one of the basic strengths of P-R and D-J. Manufacturers realize that projects funded by P-R and D-J increase demand for their products. No interested party in the fish and wildlife community disputes the *need* for nongame programs. However, the *funding mechanism* proposed for the Fish and Wildlife Conservation Enhancement Act is bitterly opposed by the industries and retailers that would be subject to the tax. This should not surprise the proponents of the WDFI, because the same groups have opposed the tax since the legislation was first proposed in 1976.

A promotional brochure put out by IAFWA asks "Is there a proven model for Teaming With Wildlife?" Their answer is that P-R and D-J have been extraordinarily successful and now a "broad coalition of outdoor enthusiasts is working to expand this proven approach to address the broader challenges of today" (IAFWA n.d., Teaming With Wildlife [brochure]). Proponents also assert that user costs will be minimal and applied to

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all manufacturers so no one company will be put at a competitive disadvantage.⁴ Finally, they argue that the WDFI is a long term investment which industry should accept because it is "conserving where their customers go" (Molly Williams [IAFWA], telephone interview, 16 February 1996)

Manufacturers and retailers do not see the proposal in the same light. They raise several important objections. For example, many companies operate on very small profit margins; even minimal cost increases may endanger company survival. However, the most important objection is that unlike P-R and D-J taxes, this tax does not have a clear connection between product and use. For example, a fishing lure is most likely to be used for sport fishing, but a backpack may have no outdoor recreation use at all.

Perhaps equally important is the strong sense of ill-use that the outdoor recreation industry feels from the adversarial position taken by the Teaming With Wildlife coalition. They would prefer to work with the agencies and the environmental community on policy issues rather than to oppose them. The retailers have faced a heavy barrage of form letters which are annoying, time consuming, and costly for those companies which try to respond. Some WDFI proponents are advocating consumer boycotts of recalcitrant retailers, although this conflicts with the official position of the IAFWA. Retailers that have the ability and inclination to compare the names of letter writers to their customer lists have found little match, so they are not convinced that this proposal is "conserving where their customers go." Their current position is to wait to see the final proposed legislation.

So the battle lines have been drawn. It is unfortunate that the appropriate metaphor is martial, especially since the D-J and P-R programs are notable for their cooperative relationships between consumers, industry, and state agencies.

Fiscal Equivalence

Inexorably linked to manufacturer satisfaction is consumer willingness to pay the tax. Virtually all of the P-R and D-J excise taxes are paid by sportsmen, and the sportsmen

⁴WDFI proponents label the proposed excise tax a "user fee" (or "dedicated user fee," which sounds more responsible) whenever possible. The Teaming With Wildlife brochure and fliers avoid the word "tax" completely, even when calculating new retail prices ("The amount of the user fee will be based on a percentage of the manufacturer's price of the product, ranging from a low of 0.25% to a maximum of 5%.") (IAFWA n.d., "Collection and Distribution of Funds" [flier], 1. emphasis in original). The Wildlife Society announcement of Congressional briefings exhorted supporters: "1. first and foremost, always refer to the initiative as a DEDICATED USER FEE. 2. explain that the initiative promotes user equity by extending the user fee concept..." (Franklin 1996).

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recognize the contributions of P-R and D-J projects for their sport. In short, there is remarkable fiscal equivalence (Ostrom et al. 1993, 114) in the two existing programs.⁵

To justify the funding mechanism, proponents make three main arguments: P-R and D-J provide little nongame or diversity benefits (Doig 1992, Duda 1991); nongame and diversity benefits provided by P-R and D-J are enjoyed primarily by people who have not paid for them (Jahn and Trefethen 1978, 464); and the costs of a federal excise tax on outdoor recreation equipment and supplies will be borne primarily by those who receive benefits from the WDFI (IAFWA n.d., Teaming With Wildlife [brochure]).

The proponents are really framing two separate problems, either of which they claim will be resolved by the WDFI. Their arguments could be rephrased thus:

Problem 1: State nongame and diversity benefits are merely minor externalities of game and sportfish programs.

and

Problem 2: Nonconsumptive wildlife-associated recreationists are free-riders.

Solution: The WDFI will ensure fiscal equivalence by taxing nonconsumptive users and providing predominantly nongame and diversity benefits.

Neither the problem definitions nor the solution are supported by empirical data.⁶

Problem 1. State nongame and diversity benefits are merely minor externalities of game and sportfish programs.

There are no prohibitions in either P-R or D-J against use of federal funds for projects which are explicitly nongame, although it is true that game and sportfish program needs are so high that funds can rarely be spared for nongame projects. Sportsmen also provide a powerful and welcome lobby for state wildlife agencies. In turn, state agency

⁵The most obvious exception is the tax on handguns, added in 1970, since most handguns are not purchased for hunting. However, half of handgun tax revenues are used on hunter safety programs which arguably provides a correlation between the handgun tax and safe use of all guns.

⁶Essentially, nonconsumptive users are accused of free-riding when they obtain benefits from positive externalities. This is not logical. Proponents would be better served by arguing that while positive externalities are good, direct benefits would be even better, and then devising a more equitable funding scheme to target the nonresidential nonconsumptive recreationists.

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administrators support sportsmen by providing game and sportfish programs, and by defending their interests in the state legislatures (Machan 1986, 22).

However, many--if not most--game and sportfish projects provide substantial benefits for nongame species, habitat, and nonconsumptive recreational use. For example, Indiana's P-R and D-J expenditures are typical state projects.

Table 2: 1991 Indiana Sportfish and Wildlife Restoration
about here

As Table 2 shows, in 1991, benefits from Indiana P-R and D-J funds were not limited to hunting and fishing. For example, funds were used in vegetation control, stream flow regulation, and development and maintenance of parking areas and boat ramps. P-R money purchased land, improved habitat through seeding, creation of water holes, timber harvest, and mowing. P-R investigations in 1991 included research on avian diseases, deer depredation (which affects homeowners and farmers), and the relationship between the use of lead shot and lead poisoning. Hunter education programs provided 11,203 residents with gun safety training. Private landowners received guidance on projects such as construction in floodplains, wetlands permits, and reclamation projects. Every other state reported similar projects.

The U.S. Fish and Wildlife Service (FWS) proudly acknowledges this overlap between game and nongame benefits:

Although Pittman-Robertson is financed wholly by firearms users and archery enthusiasts its benefits cover a much larger number of people who never hunt but who do enjoy such wildlife-related pastimes as birdwatching, nature photography, painting and sketching, and a wide variety of other outdoor pursuits. Wildlife management areas acquired by the States for winter range also support substantial use by hikers and fishermen, campers and picnickers. Wetlands for summer waterfowl nesting are useful to nature lovers in other seasons. Almost all the lands purchased with "P-R" money are managed both for wildlife production and for other public uses....

Numerous non-game species enjoy "P-R" benefits too. Ground cover for game birds also is used by all sorts of other birds and small animals....In fact, wildlife managers have learned that it is virtually impossible to take an action that will benefit only one species or one group of users. Fortunately, the Pittman-Robertson Act does not restrict use of funds to game species, but instead allows their use for any species of wild bird or mammal. Much of the money spent on research, and on management as well, now is specifically aimed at helping non-game and even endangered and threatened species. (USFWS 1996)

Table 2: 1991 Indiana Sportfish & wildlife Restoration

SPORT FISH RESTORATION:

LAND ACQUISITION

Land Acquisition, Fee Title, Not Boat Access	2	Hectares	\$	11,935
Land Acquisition, Fee Title, Boat Access	1	Hectares	\$	17

AREA AND FACILITY MAINTENANCE

Operations & Maintenance, Areas & Facilities	22,346	Hectares	\$	82,296
Operations & Maintenance, Areas & Facilities	216	Sites	\$	334,973
Boating Access Sites Managed	203	Sites	\$	161,294
Hatchery Facility Maintenance	1	Site	\$	8,000

FISH STOCKING DEVELOPMENT

Maintenance Stocking	36,386,533	Fish	\$	505,557
Hatchery Facility Renovation	1	Site	\$	19,941

HABITAT IMPROVEMENT DEVELOPMENT

Reservoir and Lake Improvement	148	Hectares	\$	18,975
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USER FACILITIES DEVELOPMENT

Fishing Access	25	Sites	\$	829,318
Boating Access Development	11	Sites	\$	107,701
Boating Access Renovation or Improvement	28	Sites	\$	131,671
Miscellaneous Facilities Development	2	Sites	\$	117,645

SUPPORT FACILITY MAINTENANCE

Support Facilities Development	6	Sites	\$	47,355
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INVESTIGATIONS

Utilization	13	Projects	\$	47,250
Population Evaluation	12	Projects	\$	495,000

PLANNING AND ADMINISTRATION

Coordination and Administration			\$	124,032
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WILDLIFE RESTORATION:

LAND ACQUISITION

Land Acquisition, Fee Title, Wetland	117	Hectares	\$	208,945
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AREA AND FACILITY MAINTENANCE

Operations & Maintenance, Areas & Facilities	41,595	Hectares	\$	871,802
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INTRODUCTIONS

Restoration of Species (Stocking)	552	Sites	\$	39,290
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HABITAT IMPROVEMENT DEVELOPMENT

Watering Facilities Development	2	Sites	\$	1,091
Habitat Improvement Developments	1,174	Hectares	\$	101,715

USER FACILITIES DEVELOPMENT

Miscellaneous Facilities Development	53	Sites	\$	750
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IMPOUNDMENTS

Waterfowl Impoundment Development	20	Hectares	\$	13,957
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INVESTIGATIONS

Biology	1	Project	\$	85,350
Utilization	1	Project	\$	11,333
Habitat	2	Projects	\$	3,752
Population Evaluation	14	Projects	\$	186,728

HUNTER EDUCATION

Student Training	11,203	Students	\$	103,725
Ranges Maintained	22	Sites	\$	27,412

PLANNING AND ADMINISTRATION

Coordination and Administration			\$	420,550
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TECHNICAL GUIDANCE

Assistance to Private Landowners	526	Number	\$	12,787
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Of course, nongame species are not the primary target of P-R and D-J programs, and game programs may be detrimental effects on some nongame species, but P-R and D-J programs clearly provide substantial benefits in habitat conservation, research, and recreational opportunities for nongame species as well as for game and sportfish.

Problem 2. Nonconsumptive wildlife-associated recreationists are free-riders.

Figure 1: Overlapping Activities of Sportsmen
and Nonconsumptive Participants
about here

Half of all sportsmen engage in *primary nonconsumptive activity*, defined as "feeding, photographing, or observing fish or other wildlife"; 27% of all sportsmen engage in *nonresidential nonconsumptive activity*, defined as "trips or outings at least one mile from home for the primary purpose of observing, photographing, or feeding wildlife" (1991 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation [Survey], Appendix A, A-3 and A-4). Twenty-six percent of all nonconsumptive users and 36% of nonresidential nonconsumptive users also hunt or fish (Survey, Tables 53 & 54).

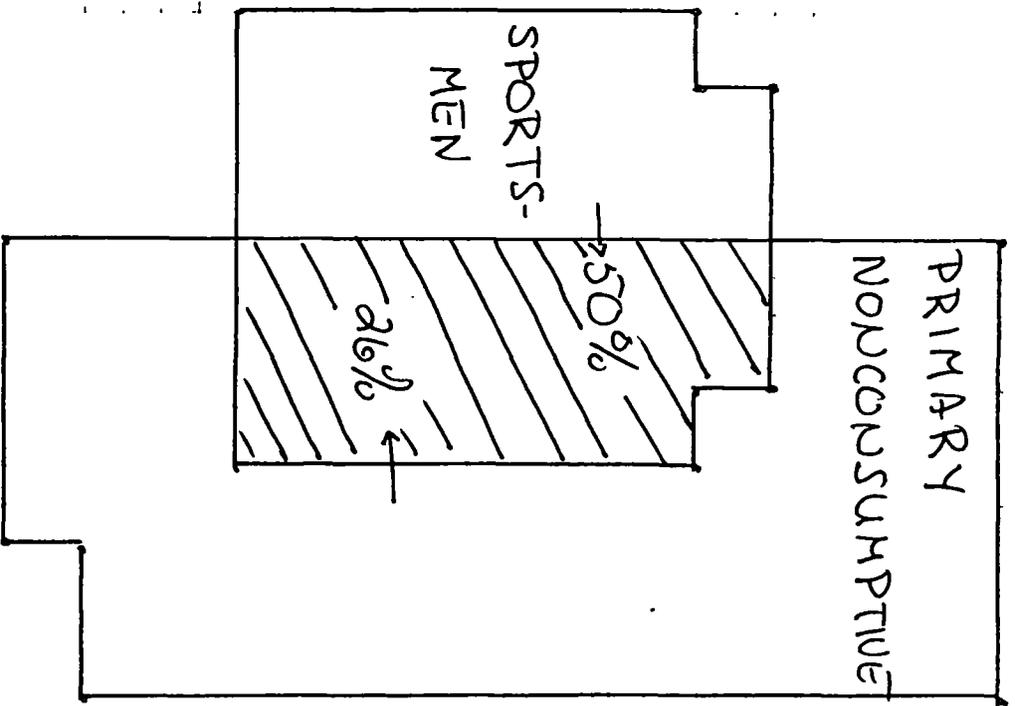
As Figure 1 indicates, approximately 96 million people engage in wildlife-associated recreation (40 million sportsmen, 76 million nonconsumptive users, 20 million overlap). Of these, 40 million (42%) pay some wildlife-associated excise taxes. If we assume that nonresidential nonconsumptive users are most likely to benefit directly from federally-aided state projects and subtract the residential nonconsumptive users, we find that of 59 million wildlife-associated recreation participants (40 million sportsmen and 30 million nonresidential nonconsumptive users, 11 million of whom are also sportsmen), 69% pay some P-R and D-J excise taxes. Of the 30 million nonresidential nonconsumptive users alone, 36% pay some federal aid excise taxes.

It is important to remember that one-fourth of the cost of any federally aided project is paid by state funds, and many state conservation activities receive no federal funds at all. State money comes from a variety of sources such as dedicated taxes, general revenue, endowments, license plate sales, and tax check-offs. For example, in Indiana, 52% of the 1991 Division of Fish and Wildlife budget derived from state sources (Division of Fish and Wildlife Annual Report). In the same year, 48% of state residents participated in nonconsumptive activities, and 16% engaged in nonresidential nonconsumptive activities (Survey, Table 70).

Table 3: Selected State Agency Budgets
about here

Problem 3. The WDFI will ensure fiscal equivalence by taxing nonconsumptive users and providing predominantly nongame and diversity benefits.

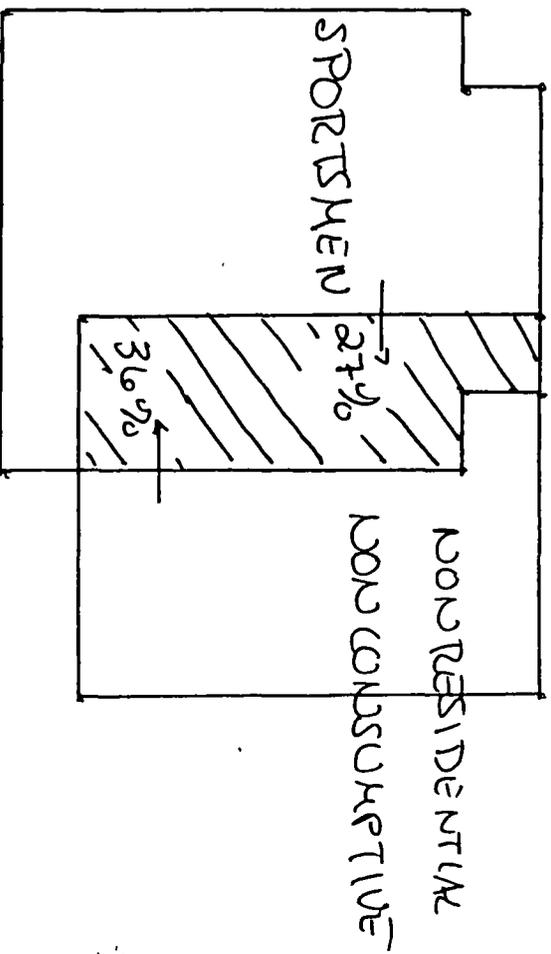
Fig. 1: Overlapping Activities of Sportsmen and Non consuming Participants



40,000,000 SPORTSMEN

76,000,000 NONCONSUMPTIVE

20,000,000 SHARE



40,000,000 SPORTSMEN

30,000,000 NONRESIDENTIAL

11,000,000 SHARE

Table 3: Selected State Agency Budgets¹

State	Annual Agency Budget FY 1991	% Federal Aid (P-R & D-J)
Arizona	\$ 34,127,858	32%
Florida	51,652,972	24
Idaho	31,507,026	34
Indiana	10,640,693	48
Minnesota (1)	51,242,872	24
Missouri	92,978,244 (2)	6
New York (1)	30,718,000	22
South Carolina (3)	39,552,614	16
Wisconsin (4)	393,508,900	10
Wyoming	31,090,836	19

- (1) State does not have a governing commission for wildlife.
- (2) Missouri generates additional revenue from a conservation sales tax.
- (3) South Carolina has since reorganized its state natural resource agencies and no longer has an independent wildlife agency.
- (4) Wisconsin has a consolidated Department of Natural Resources; this figure is for the entire department.

¹Source: McMullin 1993; Indiana data comes from the 1991 Annual Report of the Indiana Division of Fish and Wildlife.

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Pshaw. Sixty-four percent of nonconsumptive activity is residential (Survey, Table 54). Residential activity is defined as

[A]ctivity within 1 mile of home with a primary purpose that is wildlife-related: (1) closely observing or trying to identify birds or other wildlife, (2) photographing wildlife, (3) feeding birds or other wildlife on a regular basis, (4) maintaining natural areas of at least one-quarter acre for which benefit to wildlife is the primary purpose, (5) maintaining plantings (shrubs, agricultural crops, etc.) for which benefit to wildlife is the primary purpose, or (6) visiting public parks within 1 mile of home for the purpose of observing, photographing, or feeding wildlife (Survey, Appendix A, A-4).

Most of the cost of these activities is paid by the resident. Under the proposed legislation, residential nonconsumptive participants would pay the excise tax on much of their equipment and supplies; the WDFI draft list of items to be taxed includes wild bird seed and wild animal feed, wild animal and bird feeders, bird baths, housing for wildlife (e.g., birds, bats, squirrels), nest platforms, field guides, audio tapes, CD-Rom guides, lenses, scopes, tripods, window mounts, binoculars, monoculars, cameras and camera equipment, film.

While there may be some general benefit from WDFI programs, such as an increased number of songbirds throughout the region, residential participants receive no direct benefits from projects such as improved parking, more boat ramps, or educational signs. The residential participant probably receives the same benefit--but no more--as any other state inhabitant. While the general social benefit is important, it is not a result which should be used to justify "user-fee" revenue collection.

Even more problematic--and this is the crux of industry's objection to the tax--many of these products are purchased by people who have no interest in wildlife-associated recreation. Hiking boots and mountain bicycles are familiar sights on college campuses and urban streets. I have carried portable water purifiers on research trips to countries with unreliable municipal water systems. Binoculars, cameras, and their accompanying paraphernalia are used to view more than just wild animals. Recreational vehicles are used to travel to craft exhibitions and dog shows; sport utility vehicles in many cases are the primary household transportation.

Under the WDFI, there is a poor fit between who bears the costs and who receives the benefits. Many will pay but receive little or no benefits, and many who receive benefits are already paying through P-R and D-J. In short, the proposal lacks fiscal equivalence.

Enduring Institutional Design

Based on design principles identified by Ostrom (1990, 90) and Ostrom, Gardner and Walker (1994, 315-316), we should expect the state game and fish agencies to be stable and enduring management institutions. The game and sportfish federal aid programs reinforce the agencies' design. The boundaries of the resource, the area in which it is found, and the

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class of individuals which have access to it are all clearly articulated. The government agencies which regulate access are intimately connected to the appropriators. Indeed, some might claim these are "captured agencies," which is a pejorative label in terms of bureaucratic theory but, if true, also describes a situation which sustains the management institution. Enforcement mechanisms are fairly efficient; they are certainly adequate to sustain the resource.

First, the boundaries for the resource (wildlife) and the appropriators (state residents) are clear. All state residents have a limited right to appropriate wildlife because wildlife is public property held in trust by the state.⁷ State residents have clearly defined rights to wildlife both in law and custom. Eligibility for hunting and fishing licenses are found in regulations, and the conditions under which licenses are denied or revoked are equally clear. State regulatory power is over the animals and not their locations, so it is largely irrelevant if the animals are found on public or private land; state game and fish agencies do not regulate land use. Thus the resource boundary is the state border, and class of appropriators with access rights is all qualified state residents.

Second, state residents have an unusually close relationship with decision-makers.

In 27 states, wildlife interests are regulated by fish and game commissions. Some states have consolidated their natural resource concerns into one centralized agency; six states have boards or commissions which oversee all natural resources, while several have retained some aspect of their old wildlife commissions nested within the larger agencies. Only two states, Maine and North Dakota, have separate wildlife agencies which are not overseen by a commission.⁸

⁷The federal government controls fisheries outside the states' statutory limits, and it has ultimate jurisdiction over migratory birds and threatened and endangered species. Cooperative institutions among coastal states and the federal government to manage economically important or protected fish and marine mammals found within state boundaries have effectively removed the option of independent action by individual states. The legal issues surrounding jurisdiction over wildlife on federal land are also extremely complex and ultimately unclear. Those issues are not germane to this paper, but readers should be aware that the statement about control and jurisdiction has been considerably simplified. A introduction to these legal issues may be found in Susan Buck, Understanding Environmental Administration and Law, 2nd ed. (Washington, DC: Island Press, 1995, Chapter 6.

⁸These data are compiled from Gordon (1995) and Musgrave and Stein (1993), supplemented by telephone interviews for clarification. Naturally, some personal judgment was used. For example, the Nevada Division of Wildlife is governed by a Board and nested in the larger Department of Conservation and Natural Resources. Because the Board apparently has complete authority over the Division, I chose to count Nevada as an autonomous agency governed by an independent commission. Vermont, on the other hand, also has a Board to oversee the Department of Fish and Wildlife, which is housed in the Agency of Natural Resources. After a long conversation with the Fish and Wildlife

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State citizens choose the elected officials who appoint the commissioners or agency chiefs. Usually state law requires commissioners to have some expertise in fish and wildlife, and appointees most often are people of status and leadership in their own communities. Many states have distribution requirements for the commissions; in West Virginia one commissioner comes from each congressional district and the remainder from the state at large, while in Tennessee at least one commissioner must be over age 60 and one a member of a racial minority. Commissioners often have staggered terms, which provides some independence from legislative vagaries. These are officials who not only will listen to the opinions of their constituencies but who were also chosen in part because they share those opinions.

Residents have a number of formal mechanisms for influencing agency decisions. For example, commissions usually hold public hearings before approving any major regulatory changes. In the early 1980s, the Virginia game commission held hearings to discuss a proposed spring raccoon season, which would allow raccoon hunters a period to train their dogs before the field trial season began. At the same hearing, they also discussed moving the muzzle-loader season to precede and slightly overlap the bow-hunting season. Both proposals were withdrawn: residents objected that the raccoon season would be too disruptive during spring breeding, and the bow hunters pointed out the greatly reduced odds of successfully stalking a deer that had been hunted by muzzle-loaders the week before.

On paper the authority and responsibility of the commissions, the agency directors, and the other state natural resource agencies are clearly defined, but in practice there is a great deal of informal communication, negotiation, and compromise. A commission is unlikely to overrule the recommendations of its state wildlife biologists who, in turn, are unlikely to recommend politically unrealistic policies. Residents also have a number of informal access points. For example, they have direct community access to commissioners and game wardens, and special interest groups such as the Audubon Society and the National Wildlife Federation have state chapters to lobby for sportsmen's programs.

Enforcement is both internal and external, informal and formal. State game wardens and other law enforcement personnel monitor licenses and catches. Citizens may be encouraged to assist the wardens by reporting poachers. Hunter education classes try to instill a sense of "sportsmanship." While the formal enforcement mechanisms maybe quite inflexible, informal ones allow more latitude. Many minor sporting infractions are ignored by the community as long as they remain small scale, but gross violations are likely to incur community censure. For example, in the mountains of Virginia, practically any farmer will shoot a buck out of season, but they use the meat, and very few would shoot a doe. While this level of compliance is not as high as a purist might wish, it is sufficient to maintain an adequate supply of game. The costs of providing a higher level of compliance would not be reflected in substantial resource gains.

Commissioner's staff in which I was told the Board is ultimately "advisory," I counted Vermont as not autonomous.

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Monitoring in this policy area is more oriented to checking resource supplies than to ensuring rule compliance. Program success--provision of a sustainable resource stock--is easily measured for game and fish policies; managers and sportsmen are soon aware of significant changes in the resource. As long as game and fish are plentiful, biologically sustainable (adequate numbers, age and gender distributions, sufficient habitat, etc.), and accessible, both sportsmen and managers are content.

The WDFI does not share these characteristics. If the initiative were enacted, it would change the dynamics of existing game and fish management institutions. To take the last point--measuring program success--first, nongame and diversity program successes will be very difficult to measure. Sportsmen know what they are buying, but nonconsumptive users are paying for an aesthetic experience which is difficult to evaluate or to assess in terms of project results.⁹ And, since for those who are not sportsmen, all animals are of equal value, a truly perverse person might argue that nonconsumptive fees should be spent on game and sportfish as well as nongame animals. The principle of fiscal equivalence suggests such a policy.

The WDFI fails to match other characteristics of successful management institutions as well. Hunters and fishers form a clear constituency for the state agencies, but nongame programs have broader constituencies that challenge old program goals. For example, birders may oppose land management practices such as clearing woodland to improve quail habitat because it reduces and fractures large tree stands required by deep-forest songbirds. This sort of incompatibility leads to conflicts between the old sportsmen constituencies and the new nongame advocates. Increasing public concern for biodiversity is already affecting state agencies.¹⁰ The old access points (public hearings, other forms of citizen input, special interest lobbies) have begun to lose their focus. Sportsmen who have been accustomed to working closely with the agencies are certain to be annoyed at the changes, partly from our natural human habit to resist change and partly because it represents a real erosion of control over an important resource.

Finally, enforcement (monitoring and sanctions) are difficult to envision for nongame and diversity programs. What would be enforced? The enforcement issue for game and fish policies is compliance by appropriators with appropriation rules. In contrast, nongame enforcement issues parallel problems faced by pollution-regulatory agencies: is the agency meeting the legislative intent? Citizen groups will monitor agency compliance with nongame and diversity program goals. Should we envision new laws allowing citizen suits to force

⁹"Nonconsumptive" is a misnomer since all resource use implies some consumption, such as crowding, disturbing sensitive animals, or littering (Wright 1992, esp. Ch. 9).

¹⁰International concern is growing as well, as evidenced by the Biodiversity Convention (in force December, 1993). The United States has signed the Convention but the Senate has not ratified it and is unlikely to do so under Republican control. However, substantial new programs in both developed and developing countries continue to focus on biodiversity protection.

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agencies to enhance nongame and diversity at the expense of game? This new focus will certainly disrupt the existing balance within the agency and force it to face a category of policy implementation with which it has no experience.

Conclusion

Game and fish agencies might do well to be wary of the WDFI. First, a new constituency with their financial right newly vested in agency decisions might upset the delicate balance within state political systems. Second, expanding agency responsibilities to include nongame and diversity interests may impose legal burdens which the agencies might want to avoid, no matter how willing they are to assume the same responsibility voluntarily. Third, the unenthusiastic response of affected industries should be an indicator that even if the Fish and Wildlife Conservation Enhancement Act should pass, efforts to amend or to repeal the law are likely. If the programs become expected and then the funding is removed, agencies could find themselves in an awkward political situation.

State wildlife agencies would be better advised to examine their institutional links with other natural resource agencies--especially those which regulate land use--to share responsibility for nongame and biodiversity programs. While it may be tempting to see increased funding as a path to higher status within state government hierarchies, the increase in status may come at the cost of institutional stability.

The need for nongame and diversity programs is beyond question. However, the present WDFI is not an appropriate mechanism. To return to the title of this paper: the Wildlife Diversity Funding Initiative does not look like the P-R and D-J ducks, no matter how hard it waddles and quacks. And, unlike the Ugly Duckling, it is not going to be a Swan.

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Definitions

Source: 1991 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, Appendix A

Fishing: The sport of catching or attempting to catch fish with a hook, line, net, bow and arrow, or spearfishing equipment; also catching or gathering shellfish (clams, crabs, etc.). The non-commercial seining or netting of fish, unless the fish are for use as bait. For example, seining for smelt is fishing, but seining for bait minnows is not included as fishing.

Home: The starting point of a wildlife-related recreational trip. It may be a permanent residence, or a temporary or seasonal residence such as a cabin.

Hunting: The sport of shooting or attempting to shoot wildlife with firearms or archery equipment.

Nonconsumptive activity: Feeding, photographing, or observing fish or other wildlife. (See also primary residential and primary nonresidential activities.)

Participants: Individuals who engage in fishing, hunting, or a nonconsumptive activity.

Primary nonresidential activity: Trips or outings at least one mile from home for the primary purpose of observing, photographing, or feeding wildlife. Trips to zoos, aquariums, and museums are not included.

Primary residential activity: Activity within 1 mile of home with a primary purpose that is wildlife-related: (1) closely observing or trying to identify birds or other wildlife, (2) photographing wildlife, (3) feeding birds or other wildlife on a regular basis, (4) maintaining natural areas of at least one-quarter acre for which benefit to wildlife is the primary purpose, (5) maintaining plantings (shrubs, agricultural crops, etc.) for which benefit to wildlife is the primary purpose, or (6) visiting public parks within 1 mile of home for the purpose of observing, photographing, or feeding wildlife.

Public land: Land that is owned by the local, state, or Federal government.

Private land: Land that is owned by a private individual, group of individuals, or nongovernmental organization.

Sportsmen: Individuals who engage in hunting, fishing, or both.

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