# Introduction

The conservation of wild lands and natural resource is of the utmost importance to the United States during a modern era characterized by rapid urbanization and the looming environmental challenges posed by the changing climate. As is often the case when society is faced with a problem, political processes and interests are an integral part of the formation of a policy solution. A surefire means to garnering broad support for policy aimed to conserve natural resources is to create a bond between citizens and the outdoors and there is no better way to do so than through outdoor recreation. If the country wishes to protect the climate and the planet, a connection between the people and the land must be established.

Outdoor activities like hunting and fishing are staples of American culture that predate the founding of the nation itself. They have evolved from necessities for survival into a pastime enjoyed by families and friends to escape reality for a few short days, make lifelong memories, and to put fresh, healthy, and ethically sourced food on their table.

The benefits of conservation and the accessibility of outdoor recreation expand well beyond the limited scope of environmental protection. Studies have shown time and time again that a key component of a healthy lifestyle is spending time outside (<https://media.rff.org/documents/RFF-DP-09-21.pdf>). Outdoor recreation enhances the health and livelihood of people of all generations. Children have been shown to benefit from participating in sports, adults have been shown to have lower stress from being outdoors, and older adults receive a number of positive externalities from simply going for a walk (<https://media.rff.org/documents/RFF-DP-09-21.pdf>).

Outdoor recreation is a key component of the American economy. According to the Bureau of Economic Analysis, the outdoor recreation industry accounted for 1.8% of the Gross Domestic Product (GDP) of the U.S. in 2020. In some states it was up to 4.3% of their GDP that year(BEA). Considering the environmental importance, health benefits, and economic significance of outdoor recreation, it is clear that it is in the best interest of the United States to preserve and promote participation in it.

Hunting, fishing, and all other forms of outdoor recreation require land to participate in, and lots of it. The conservation of wild lands is an economically irrational but environmentally and socially imperative challenge for a government to take on. The Bureau of Land Management, Fish and Wildlife Service, and the National Park Service under the Departments of the Interior and the United States Forest Service under the Department of Agriculture administer 606.5 million acres of land in the U.S., approximately 24% of the total area of the country (CRS Federal Land Ownership). This land is largely available for hunting, fishing, backpacking, birdwatching, rock hounding and a plethora of other forms of outdoor recreation.

One of the principal tools used by the state and federal governments to acquire land and promote outdoor recreation nationwide is the Land and Water Conservation Fund (LWCF). The LWCF provides the funds necessary for the acquisition and development of recreation land. These funds are available to federal land management agencies under the Department of the Interior and the Forest Service as well as to the states via matching grants. According to the Department of the Interior, the LWCF has provided $5.2 billion to support outdoor recreation since 1965. These outdoor recreation projects include wildlife areas, trails, campgrounds, as well as parks, playgrounds, and sports fields. Every county in the U.S. has at least one LWCF funded project (DOI about the LWCF page). As it was passed in 1964, the LWCF was required to be periodically reauthorized and funded by Congress. Authorization is the approval of spending but does not go so far as to actually allocate funds for the LWCF. Funding is the actual allocation of funds into the LWCF account to be spent in accordance with its directive. For the LWCF to function as a conservation mechanism, it must be both authorized and funded.

The LWCF was passed in 1964 and establishes funding for the BLM, NPS, FWS, and USFS to purchase more land for outdoor recreation and for grants to states to create more outdoor recreation opportunities. In 1968 the LWCF was amended to draw revenue from offshore oil drilling, and it was gradually increased until 1977. Congress was unable to reach an agreement during 2015 budget negotiations to reauthorize the LWCF and on September 31st of that year it expired. However, a three-year extension was agreed upon in the following weeks. The LWCF was permanently reauthorized in 2019 and during the summer of 2020 the LWCF was permanently funded.

While the LWCF has clearly made an impact on outdoor recreation in the U.S., the scale of its impact is unclear. The purpose of this research is to evaluate the success of the LWCF from its inception until 2019. A clear measurement of the success of the LWCF will serve to benefit future land conservation policy by allowing it to maintain the aspects of the LWCF that are shown to be effective and improve or eliminate the areas identified as ineffective or detrimental to its purpose, as well as informing policy makers on whether the LWCF should remain as is in perpetuity, or if amendments are required to maximize its impact.

To evaluate the LWCF, a framework of policy evaluation must be constructed based on a review of relevant scholarship. Their work will focus on policy evaluation in the abstract and examine the various models of evaluation proposed and discuss their advantages and shortcomings. Understandings of elite behavior will be similarly reviewed to aid in understanding the motivations of the actors responsible for policy implementation. Because the LWCF is a conservation-oriented policy, evaluating it poses some unique challenges that other policy evaluations are not faced with. Therefore, literature on conservation and environmental policy evaluation will also be included to address these oddities.

This project sets out to answer the primary question of whether the LWCF has been an effective conservation policy from its conception in 1965 until 2019. This question will be answered by separating the LWCF’s lifespan into three periods. For each of these periods, the purposes of the LWCF will be identified and empirical outcomes relating to those purposes, such as the amount, location, and distribution of public recreation land, as well as the attendance rates of those lands will be measured. Additionally, LWCF funding over time will be examined to aid in understanding trends in the data.

The study finds that the LWCF was an effective program from 1965 to 1977, significantly less effective from 1977 to 2000, and ineffective at fulfilling its purposes from 2000 to 2019.

The principal reason for this downward trend is the reapportionment of funds from the states to the federal government, who then did not properly utilize the fund to achieve its desired outcomes.

# Literature Review

To objectively measure the externalities that have come about as a result of the Land and Water Conservation Fund, a review of the relevant scholarship is required. Scholars have researched and written on the topic as it relates to the LWCF with several levels of abstraction. Policy evaluation in a broad sense has been widely discussed and several frameworks for evaluation have been proposed. Some scholars have taken these broad works and interpreted them through the lens of environmental policy, which will also be examined. Understanding the purposes and outcomes of, as well as the changes made to the LWCF requires an understanding of the motivations of the political actors responsible. Therefore, the scholarship seeking to understand the behavior of political elites will be considered. The scholarly conversation that these works comprise will be utilized to form a framework that can be used to evaluate the LWCF as objectively as possible. Abstract policy evaluation theory is vital to the question at hand because it provides a means of measuring outcomes that is not as tainted by the authors political interests or ulterior motives. Environmental and conservation policy evaluation scholarship offers a connection between the aforementioned theory and begins to focus it in on the policy area that the LWCF exists in.

The scholarship proposes several policy evaluation frameworks, of which an *ex nunc* variation of the *ex post* implementation of the “goal-achievement” model is used in this case study. Since a control group for the case does not exist, the program is characterized by the time that it has been in effect and it has had far reaching impacts on the entire country, the LWCF will be reasonably credited with outcomes by inferring the counterfactual and determining if those outcomes arose as a result of mechanisms put into place by the LWCF. The behavior of congressional elites will be assessed by establishing their role as an ordinary legislator or as a coalition leader and assuming that their foremost decision-making priority is re-election, followed by personal advancement, and then advancement of their political party’s interest, both in their chamber of congress and generally.

## Abstract Policy Evaluation

Evaluation can be broadly defined as the process of determining the merit, worth, or value of the product of a process (Scriven). Narrowing in on policy evaluation, it is the retrospective assessment of the value of the implementation and outcomes of government intervention in a specified area with the intention of influencing future interventions (Vedung).

The intent of this research is to assess the LWCF and its outcomes with the hope of providing feedback to improve future policies in the field, and it therefore falls under the academic umbrella of policy evaluation. Furthermore, policy evaluation is the assessment of policies in a certain policy area by against a specified set of criteria, where the results of such assessment are used to create future policy recommendations (HEPE). The key components of a successful policy evaluation are identifying policy results, determining which specific mechanisms within the policy are responsible for the results, and then comparing those elements against a set of determined evaluation criteria (Vedung). It is fundamental to this policy evaluation, if it is to reach a meaningful conclusion, that the criteria against which the evaluate the outcomes of the LWCF are identified. This research will identify evaluation criteria by examining the intentions of the LWCF for each of the time periods.

There are several models of policy evaluation. The oldest model is known as the “goal-achievement” model. This model is comprised of two basic questions: are the results of the policy aligned with the goals it set out to meet, and are these results because of the policy (Scriven, found in Mickwitz). The most glaring issue with this model of policy evaluation is its failure to account for the unanticipated effects that a policy may have. Additionally, the costs of a policy are not considered under this model (Mickwitz).

The model of “goal-free” evaluation was created to address the unanticipated effects criticism of the goal-achievement model. Under this model of evaluation, the evaluator should not be aware of the goals of the policy and instead focus solely on its empirical effects. The rationale behind this model is that the goals of a successful policy will be fully realized in its effects (scriven, found in Mickwitz). While this model does account for the unanticipated side effect problem of the goal-achievement model, it does not provide accountability to the elected bodies that set policy goals. Therefore, it is criticized as being incompatible with a transparent democratic process (Vedung, found in Mickwitz). Furthermore, this model again fails to incorporate a policy’s cost into its assessment (Mickwitz).

The “side effects” model also seeks to address the side effects criticism of the goal-achievement model. In this model, the effects of a policy are divided into intended and unintended side effects. It is then determined if these effects took place within or outside of the target area and the effects are categorized as beneficial or detrimental (Mickwitz).

Policy evaluation can be conducted as *ex ante* or *ex post*. *Ex ante* evaluation takes place prior to policy implementation, while *ex post* occurs after a policy intervention has been completed (Nagarajan pg 9). *Ex nunc*, or intermediate policy evaluation, occurs after a policy has been implemented but while its direct effects are still being observed (HEPE). Some scholars consider *ex nunc* as a part of *ex post* (Nagarajan pg 9).

This evaluation utilizes the goal-achievement model. The goal-achievement model is the best choice in this instance because it provides a limited scope of evaluation which allows for a focused look at the direct impacts of the policy specifically without getting lost in the weeds of potential spillovers. The goals of the LWCF can be identified, the actors responsible for it often state them plainly, and data measuring its impacts is readily available in most cases. The goal-free and side-effects models are less than ideal models of evaluation for this study. The goal-free approach suggests that evaluation should focus soley on the impacts of a policy without narrowing in on the intended ones. Such a large scope would provide a holistic evaluation of the LWCF, but it is impractical to apply in this case given the scale of the policy and the quantity of potential spillover effects it may have had. This problem is further compounded by data availability concerns and questions about how the spillovers could be tied directly back to the LWCF. The side-effects model would be ineffective to evaluate the LWCF because of its requirement that a target area be identified, with the assumption that there is an area outside of the target area that can be examined. Since the target area of the LWCF is not clearly defined, measuring spillovers outside of that zone is impossible.

To conduct a thorough evaluation of a policy’s effectiveness, it is important to understand the behavior of the elites responsible for its implementation. Congressional elites are divided into two groups: ordinary legislators and coalition leaders. Ordinary legislators often face dichotomous choices or several dichotomous choices when faced with issues requiring a decision (Arnold). Coalition leaders are not faced with the same dichotomies. The role of coalition leaders is not to make decisions on whether to advance a policy, but to shape that policy (Arnold). Coalition leaders are not necessarily members of congress themselves, though they may be. They include party leaders, congressional staffers, the president and their advisors, bureaucrats, and interest group leaders (Arnold). While leaders are free to put forth whatever policy they prefer, savvy coalition leaders are aware that their choices are limited by the need to garner the favor of ordinary legislators (Arnold). Understanding the roles of the actors responsible for the LWCF is important to understand its purpose and is therefore vital to conducting an evaluation.

Ordinary legislators are motivated in their decision making by a variety of factors, including the enactment of good policy and the pursuit of influence in government. However, the primary concern of all elected representatives is reelection (Arnold). To this end, congressional actors will analyze each decision they make in office with its electoral consequences in mind. Often times, their secondary motivation is to curry favor among their peers in congress (Bach on Kingdon). If they do not believe their reelection is at risk, they may pursue any of their secondary goals (Arnold).

Despite re-election being the driving force behind the policy decisions made by ordinary legislators, voters typically know little about the policy positions of a candidate and elections are often not won or lost on that issue (Arnold). However, legislators have a ceaseless concern with the electoral ramifications of their decisions (Kingdon via Arnold). Instead of considering how a policy decision may help or hurt their popularity among constituents directly, they consider how future electoral opponents may weaponize specific votes on policy against them (Kingdon via Arnold).

Instead of considering what past or current policy preferences voters may hold, legislators attempt to anticipate their “potential preferences” and adjust their decision-making according to what they believe the future preferences of their constituents will be. (Arnold). Legislators form potential preferences based on communication from constituents, the ways that similar issues have developed in the past, what actors may be interested in shaping public opinion, and from the successes and mistakes of their peers (Arnold).

Understanding the motivations of political actors is essential to understanding the purposes of the policies they put forth. Therefore, this study will examine a few key actors who played a role in the implementation of the LWCF. This examination will bear in mind that they act in a self-interested manner and balance the primary motivation of re-election with secondary motivations such as the wellbeing of the party and their own advancement.

## Conservation Policy Evaluation

Although the scholarly work on policy evaluation has already been reviewed, environmental and conservation policy pose unique challenges to evaluators. Most conservation policies have multiple outcomes that they seek to achieve and multiple scales on which these outcomes can be measured (Baylis). For instance, successful land conservation policy may have multiple intentions that could be measurable by the square mileage of land conserved, the diversity of species that occupy conserved land, and the recreational value of the land to the citizens that the policy-creating institution is beholden to. It would be inadequate to declare a policy that set out to address all these metrics successful or unsuccessful without evaluating it by each of those metrics.

Furthermore, confounding factors also complicate the evaluation of conservation policy (Baylis, Ferraro & Pattanayak). In traditional scientific research, the effects of confounding factors are neutralized by baseline measures and control groups (Sutherland via Ferraro & Pattanayak[17]). However, confounding effects are often not considered when conservation policy is evaluated (Ferraro & Pattanayak). Confounding factors may be mitigated by inferring the counterfactual, that is to theorize what may have likely occurred had the policy intervention not been implemented (Ferraro). The LWCF has no consistent control group that its success can be measured against, but it is important to consider that alternative explanations for the achievements and shortcomings of the LWCF exist. Therefore, inferring the counterfactual is the best option available to understand the effects that the LWCF had.

Many conservation and environmental policy interventions lead to unanticipated spillover effects (Baylis). These effects may be far reaching, take a considerable period of time to be realized, and are therefore difficult to identify (Mickwitz). Spillover and unintended side effects may be accounted for during examination of conservation policy using a goal free approach to policy evaluation. (HEPE). While spillover effects may be noteworthy, the merit of including them in this evaluation is not enough to overcome the shortcomings of the goal free model laid out in the previous section.

# Case Overview

The end of World War Two led to economic prosperity and more free time and money to spend on recreation, but the simultaneous suburbanization of the country made land for recreation more inaccessible to the masses than ever. Instead of wild places being found in every town and neighborhood, Americans needed to travel long distances on crowded highways to find that wild country their ancestors had never been more than a stone’s throw away from. Realizing the impending crisis of outdoor opportunity, Congress convened the Outdoor Recreation Resource Review Commission (ORRRC) in 1958 to identify the country’s outdoor recreation needs over the next several decades (https://foresthistory.org/wp-content/uploads/2017/01/RFF-DP-08-44.pdf). Based on their findings, the Kennedy administration introduced the Land and Water Conservation Fund which received overwhelming bipartisan support in the House and Senate, and was signed into law by the Johnson Administration in 1965. The fund went into effect in 1965 with the intention of safeguarding recreation lands to be enjoyed by generations of Americans to come. Despite popular misconception, the LWCF was not intended principally as a means for the federal government to expand its land holdings. It was instead an effort to reallocate land resources to best serve the recreation needs of Americans. The reliance of LWCF funding on the liquidation of some federal land holdings to fund further land acquisition makes it clear that reallocation was the intent of the law. This intention is reflected in the text of the law, as well as the arguments in opposition to the amendment proposed by Senator Allott (R-CO) in 1964 to remove such a funding mechanism from the bill. Senator Church was adamant in his objection to the Allott amendment, stating that it would effectively render the bill impotent by eliminating a key source of funding (1964 senate transcript pg 19109). This funding mechanism makes political sense as well. The legislators responsible for its creation sought to create a benefit for their constituents in the LWCF without imposing additional direct costs upon them. By funding the LWCF with revenue from the sale of federal land, no additional cost is incurred for their constituents, who likely don’t recreate on the lands that would be sold. However, they would be able to fund the creation and expansion of National Parks, National Forests, state parks, and municipal projects that their constituents would likely benefit from directly and that the representative could take credit for.

Meanwhile, Senator Allott of Colorado likely intended his amendment to limit the effectiveness of the LWCF. In 1964, 36% of Colorado’s land was owned by the federal government. As a state known for its beautiful scenery and excellent recreation opportunity, it would be reasonable for Allott to have assumed that the lands being sold to finance the LWCF would not be in Colorado while some of the lands acquired would be. Republican victory in Colorado’s 1964 election was anything but certain due to the state’s poor financial situation (McBride, 1965). More land being ceded to the federal government meant that the state would be unable to generate much needed revenue from it. Because he knew that his re-election would be at risk if the Republican brand was tarnished in Colorado, but also knew that an electoral opponent would weaponize opposition to a popular conservation and recreation measure, Senator Allott introduced this amendment to walk that fine line and protect his fellow Republicans while also not exposing himself to attack with an unpopular vote. Senator Dominick (R-CO) joined him in his support for the amendment.

It soon became apparent that the LWCF’s original funding amount was inadequate to achieve its goals. Citing an increase in land prices across the country and inadequate funding up to that point, the LWCF was increased from $100 million to $200 million and was amended to allow for receipts from oil and gas leases on the Outer Continental Shelf (OCS) to be used as a source of funding for the LWCF (Senate transcript). The Washington Post referred to the LWCF increase and additional funding as “probably the most important conservation measure passed by the 90th Congress” (1968 Senate Transcript).

The fund was increased several more times until 1977, when it was increased to $900 million for the final time. The rationale for this increase was in part to remedy a backlog in federal land acquisition. Many land purchases had been approved to go forward, but there was no funding to complete them. Citing concerns about development and rising land prices, $450 million was set aside within the LWCF over the next two years to be spent to acquire lands already approved for purchase by prior Congresses.

In 2015 the LWCF expired and was extended for an additional three years a few months later in 2016. Critics of the LWCF cited a broken system that had deviated from its original purpose and that no longer served the recreation needs of Americans as it once had. Representative Bishop (R-UT), the chair of the House Committee on Natural Resources, a key actor in the LWCF reauthorization process, opined a states-rights and government-overreach driven opposition to the LWCF in the days after it expired in 2015. He argued in a Politico op-ed that the original law had rightfully allocated most of its funding to the states, who he argued knew how to best spend it, and that over the years the states had been crowded out of the fund by a persistently land-hungry federal government. Furthermore, the Department of the Interior has been unable to reliably report how much land has been acquired with the LWCF, opaquing the acquisition process and skirting accountability. While more land is being acquired, the federal agencies responsible for maintaining it are experiencing backlogs, denying people a quality recreation experience (Bishop, politico). While his opposition is certainly politically motivated, a LWCF reauthorization would be a political win for the Obama administration and the Democrats as they head into the 2016 election year, his claims are not without merit and his concerns are shared by many other members of congress. Senator Mike Lee (R-UT) shared his colleagues concern about a lack of reform (C-span clip). Senator Lisa Murkowski (R-AK) walked a fine line in April, several months prior to the expiration of the LWCF, as she stopped short of opposing the reauthorization of the fund but highlighted many of the same issues and suggested that the fund be altered to address them (Energy.senate.gov). As a moderate Republican, she found herself in the awkward political position stuck between states’ rights and conservation interests. Senator Murkowski takes a position that is reminiscent of Senator Allott’s original amendment in 1965 to limit the funding available to the LWCF. While she is surely aware that her constituents support conservation measures in their state and that outright opposition to the LWCF could be used against her during the next election, she also knows that a continuing expansion of federal land holdings in her state limits the revenue available to the state. Therefore, instead of opposing the law itself, she chooses to maintain its brand but support fundamentally alter its purpose.

*Case Outline Notes*

*I’m interested to hear what you have to say about my assessment of Senator Allott’s amendment, in terms of both his motivations and how it fits into my overall goal. I personally think it is an interesting point of discussion but I am also concerned that it wanders from the purpose of the section.*

*Same with Sen. Murkowski’s section.*

# Case Evaluation

## Evaluation Outline

The evaluation of the LWCF will be divided into three parts. The first two will evaluate the effectiveness of the policy as of 1976 and 2000, the dates that the ORRRC was tasked with identifying recreation needs and providing recommended policy remedies for. The third will be a contemporary (as of December 2021) evaluation of the LWCF considering relevant developments that occurred between 2001 and 2019. Although significant developments have taken place since 2019, the LWCF has been permanently authorized and funded, sufficient time has not elapsed to effectively assess the impact that those changes have had.

## Part I: 1965 – 1976

### Purposes

The recreation needs identified, and policy remedies proposed by the ORRRC are the first purposes of the LWCF to consider. These needs and remedies are relevant to the mission of the LWCF because they are largely responsible for the creation of the fund. The preamble of the LWCF Act declares that the general purpose of the LWCF is to meet the present and future outdoor recreation requirements of citizens of the United State. This statement is clearly referring to the ORRRC’s report, which set out to identify what those requirements are and is widely cited during congressional debate over the LWCF.

The ORRRC report, published by the Commission in 1962, identified a number of needs and remedies with regard to the current and future requirements of outdoor recreation in the U.S. While the LWCF does not address all of these findings (there were several other conservation and recreation oriented bills that accompanied the LWCF), it does directly address some of them. The key findings of the ORRRC pertaining to the LWCF are:

* Across the Country, Considerable Land Is Now Available for Outdoor Recreation, But It Does Not Effectively Meet the Need.

Over a quarter of a billion acres were available for outdoor recreation in 1961 but much of it was inaccessible to average Americans. Many of those lands were in Alaska or the American West and required more than a quick road trip and a picnic blanket to make use of. The report succinctly identifies the problem as not one of total land available, but of how the available lands are distributed. They determined that the available lands are not near enough to population centers to be of use to most recreators.

* Outdoor Opportunities Are Most Urgently Needed Near Metropolitan Areas.

This finding elaborates on the previous one in that it details how exactly the current recreation land available fails to meet the demand of American’s outdoor recreation needs, despite its abundance. The ORRRC projected that 75% of Americans will live in suburban or urban areas by the turn of the century and pointed out that urban areas have few areas suitable for outdoor recreation and numerous other interests vying for land. The LWCF addresses this finding in several ways. It stipulates that at least 85% of the acreage added to the National Forest System must be east of the 100th meridian, meaning that the vast majority of National Forest acquisitions would be in the eastern half of the country where many metropolitan centers are located. Therefore, National Forest lands would become more accessible to those living in urban areas. The LWCF also mandates that 40% of the fund be equally apportioned among all of the states. This provision ensures that each state will have the opportunity to use some of the LWCF’s funds to meet their own recreation needs, and that people would not be required to leave their own state to access some form of outdoor recreation. To that end, the law also stipulates that each state is entitled to at least X% of the total balance of the funds given to the states, and that no one state may receive an amount greater than 10% of the total amount granted to the states. w

* Money Is Needed.

Another problem identified in the report is a lack of funding at all levels of government for outdoor recreation related purposes. At the time, total public spending in the U.S. on outdoor recreation resources was $1 billion, a number that the ORRRC deemed to be insufficient. It is clear by its nature as a fund that the LWCF in its entirety sets out to address this problem by providing money to the state and federal governments for the acquisition and development of recreation land.

To fulfil these aims the report also recommends several policies be implemented, several of which were addressed by the LWCF. Generally, the ORRRC recommended a national outdoor recreation policy intended at all levels of government to preserve natural and historic sites by acquiring land and managing it for the highest recreation benefit. Specifically, the ORRRC recommended an emphasis on recreation planning, protection of lands, and access to recreation land. The acquisition and protection of recreation land should be focused on lands nearest to metropolitan areas and should be protected against the encroachment of non-recreation uses. Furthermore, recreation should be used as an environmental protection means and pollution control should be done through the lens of recreation protection and access. Finally, to address issues of funding, parks and public recreation lands should charge some form of use fee and a motorboat fuel tax should be imposed to assist with funding. The federal government should also establish a grants-in-aid program to help the states meet outdoor recreation funding needs.

The LWCF act itself lays out its purpose as to preserve, develop, and ensure access to outdoor recreation opportunities for people residing within the U.S. It specifically aims to achieve this goal by providing funding to the states to acquire and develop recreation land and facilities, and by providing funding for the federal government to do the same. To accomplish this goal, the LWCF at the time of its passing must be authorized and funded by Congress periodically (this requirement will be removed by later legislation). Once funded, the LWCF is broken into two primary mechanisms: state funds and federal funds.

State funding is based on the requirement that a state submit a state recreation plan detailing the recreation needs of the state’s residents and its plan to fulfill those needs to be eligible to receive LWCF money. Money given to the states from the LWCF must be used for the acquisition and development of outdoor recreation land.

Federal funding is more limited than state funding. Federal agencies, primarily those under the Department of the Interior and the National Forest Service, are permitted to utilize LWCF money to acquire new outdoor recreation land. The Forest Service is limited in doing so by the requirement that 85% of National Forest acquisitions be located east of the 100th meridian. Additionally, the federal government’s share of the LWCF is limited to 40% with the rest reserved for state grants.

Given the purposes of the original LWCF identified, the following outcomes will be assessed to evaluate the effectiveness of the policy:

* How regularly was the LWCF funded/authorized?
* Was there an increase in recreation land acquisition?
  + Was the acquired land located near population centers?
* Was there an increase in outdoor recreation participation?

### Outcomes

#### LWCF Authorization and Funding

Between 1965 and 1976 the LWCF received a funding amount of $2.299 billion in total. Of the total funding, $896 million was allotted to the federal government for land acquisition, and the remaining $1.4 billion was given to the states via grants. This ratio of federal to state allocation is in alignment with the legislatures dictation that the states receive 60% of LWCF money. Over that period, the LWCF was funded with an annual average of $209 million. It is notable that the fund had an original cap at $100 million that was eventually increased to $300 million in 1970. The minimum funding level was $16 million in 1965, which can be attributed to the novelty of the fund, so if 1965 is considered an outlier, the lowest level of funding was in 1974 with $76 million. The maximum funding level during that period was $362 million in 1972. The LWCF’s funding during this period was in alignment with the goals of the program as established at its outset. The LWCF was consistently funded to a level that was reasonably near the maximum amount allocated for it and the funding was appropriately adjusted in a timely manner when it was determined to be inadequate.

#### Land Acquisition

The federal government made good use of LWCF money to improve the accessibility of outdoor recreation via land acquisition. In 1961, four years prior to the passage of the LWCF, the federal government owned 768 million acres of land. Of this land, 722 million acres were under the jurisdiction of the NPS, FWS, USFS, or BLM. This number held steady in 1964, coming in at a total of 723 million acres with no one agency experiencing any meaningful change in their individual ownership. In 1966, after one year of the LWCF being in effect, the total land ownership by the four agencies fell to 716 million. However, this drop was largely a result of the BLM losing 7 million acres. Because the revenue from the sale of federal land is a vital source of funding for the LWCF, this reduction can be expected to be followed by an increase in land ownership by the other agencies. Sure enough, the NPS, FWS, and USFS all had small increases in their land ownership. This increase is significant because land operated by the NPS, FWS, and USFS are often more utilized for their recreation benefit whereas BLM land is operated without a recreation-specific focus. The general trend for the next ten years is the NPS, FWS, and USFS gradually acquiring more land while the footprint of the BLM continues to shrink. Coinciding with this increase in recreation land ownership by the federal government is a modest upward trend in funding for the LWCF. In 1976 the federal government owned a total of 698 million acres of land managed by the four agencies. While this figure is a drastic decrease from the pre-LWCF benchmark, most of it is accounted for the BLM shrinking from 486 million acres to 450 million acres. Meanwhile, the NPS gained approximately 7 million acres, the FWS gained 4 million, and the USFS gained 1.5 million over the first 11 years of the LWCF.

While the overall decrease and modest increases for the NPS, FWS, and USFS may appear to signal poor performance from the LWCF, it is important to bear in mind that most funding for the LWCF over this period was spent on state grants, which were then disseminated to state natural resource agencies and local governments. A prominent component of the LWCF’s mission was not only to expand access to recreation land, but to ensure that the land acquired was accessible to urban populations. The number of municipal parks in the U.S. trends generally upwards from 1950 to 1970, and does not appear to significantly increase in pace after the implementation of the LWCF. Furthermore, the total acreage of municipal parks in the U.S. decreased by approximately 500 million acres from 1965 to 1970 (1980 statab). While this data does suggest an ineffective LWCF at the local level, the value of the figures themselves are limited by inconsistent data collection[[1]](#footnote-1). Another method of evaluating an increase or decrease in the accessibility of recreation resources to urban populations is to examine the change in the accessibility of recreation land in the eastern states, which contain most major population centers in the U.S., against the western states. The eastern states for this purpose include Minnesota, Iowa, Missouri, Arkansas, Louisiana, and all states east of them, and the western states include all other states. Washington D.C. is not included in this assessment. The data suggests that the LWCF was somewhat effective during this period at increasing the accessibility of state-owned recreation land to urban populations. From 1960 to 1975 the total number of eastern state-owned recreation areas climbed from 1,514 to 2,339, an increase of 825 recreation areas. Meanwhile, western states experienced a significantly more modest jump from 1,127 to 1,335, an increase of 208 recreation areas. These figures appear at face value to suggest moderate success of the LWCF’s objective to increase recreation accessibility to urban populations, and a closer look verifies this analysis. While the eastern states did experience an increase in recreation areas, they also experienced an increase in population. Over that same period, the ratio of people per recreation area in the east decreased from 101,424 to 72,869 meaning that the expansion of recreation opportunity in those states outpaced population growth, a clear sign of success for the mission of the LWCF.

## Part II: 1977 – 2000

### Purposes

While the purpose of the LWCF from 1977-2000 remained largely the same as it did up until 1976, the one key difference is that it set aside $450 million over two years to get ahead of rising land prices and to solve a federal land acquisition backlog. Representative Phillip Burton (D-CA) during debate over the LWCF amendment described a land crisis where acquisitions authorized by a previous congress were yet to be completed which would continue to worsen as land prices rose (Senate transcript April 4 1977 pg 10204). The lands to be acquired under this special sub-fund would be added to the National Park System, National Wilderness Preservation System, National Scenic Trail System, National Wild and Scenic River System, and National Recreation Areas. It also removed the 40% limit on LWCF allocation for federal spending, and instead established that at least 40% of the LWCF must be spent on federal land acquisition(PL 95-42). Therefore, the following questions will be addressed to evaluate the success of the LWCF from 1977 to 2000:

* How regularly was the LWCF funded/authorized?
* Was there an increase in recreation land acquisition?
  + Was the land acquisition backlog sufficiently addressed?
  + Was the acquired land located near population centers?
* Was there an increase in outdoor recreation participation?

### Outcomes

#### LWCF Authorization and Funding

The LWCF was consistently funded from 1977 to 2000. The years 1978 and 1979 saw funding hovering around $800 million, likely because of the $450 million appropriated in 1977 to address the federal land backlog, and funding dropped sharply to an average of $240 million between 1981 and 1997. In 1998 the LWCF was funded to its highest level yet at $969 million, the only time over the period that it met the $900 million ceiling set in 1977. The LWCF was often funded well below the $900 million allocated to it. The average funding level over the period was only $351 million and funding dropped as low as $138 million in 1996.

#### Land Acquisition

From 1977 to 2000 the National Parks System grew from 29 million acres to 78 million acres. The lion’s share of that increase occurred between 1977 and 1980, suggesting that the funding reserved for addressing the federal land backlog in 1978 and 1979 was properly used. Land acquisition lulled between 1985 and 1995. The National Park System acquired an annual average of 38,300 acres during that decade, a number that mirrored a dip in funding for the LWCF over that same period.

A significant change in the Forest System over this period came not in the amount of land, but in the decentralization of it. While its total land holdings only increased by a modest 9 million acres, the number of individual land units almost doubled. In 1977 the forest service owned 154 separate units, and by 2000 that number had increased to 291 units (USFS Reports on Excel). This increase could reasonably have come as a result of the LWCF because the overwhelming majority of its funding during this period was allocated to the federal government. The modest increase in land holdings also correlates with the relatively low level of funding during that period as well.

The state park systems’ acreage during this period tells an interesting story. From 1975 (the last available data prior to 1977) to 2000 the state park systems across the country grew by a total just short of 3 million acres (spreadsheet). This growth coincides with drastic decreases in LWCF funding for state grants, suggesting that the program was ineffective on the state level during this period and that the states were able to come up with alternative funding methods for outdoor recreation land acquisition. The lack of state grant funding from the LWCF further suggests that the LWCF was ineffective at expanding metropolitan recreation opportunity during the period. Municipal funds for city parks and recreation projects are derived from state LWCF grants. A lack of state grant funding also means that states were unable to expand recreation opportunity using LWCF funds through the acquisition of new recreation areas that could have been nearer to urban populations.

The National Forest System did not acquire new units into the forest system during this period in the states east of the 100th meridian[[2]](#footnote-2). In 1977 the eastern states had 119 individual USFS units, and by 2000 that number had dropped slightly to 114 units. The total area of the forest system grew by approximately 2 million acres over the same period, which can be attributed to the acquisition of non-federal land within existing national forest units, as well as the expansion of existing units (Spreadsheet: gross area vs nf area). Although the actual footprint of the forest system did increase, the lack of an increase in new forest service units suggests that National Forest recreation opportunity was not significantly increased during this period and that new National Forest recreation resources were not created near population centers.

The National Park Service somewhat meaningfully increased recreation opportunity for urban and suburban populations during this period. From 1980 to 2000, visits to metropolitan NPS units increased by 49 million visitors, while visits to non-metropolitan NPS units increased by only 24 million visitors.

## Part III: 2001 – 2019

### Purposes

The purposes of the LWCF remained largely the same in 2001 as they were in 1977, except for the absence of the $450 million special fund allocated for the purchase of backlogged federal land acquisitions. Therefore, the purposes to be assessed are:

* How regularly was the LWCF funded/authorized?
* Was there an increase in recreation land acquisition?
  + Was the acquired land located near population centers?
* Was there an increase in outdoor recreation participation?

### Outcomes

#### LWCF Authorization and Funding

The LWCF was authorized and funded each year from 2001 to 2019. The average funding level was $426 million, just short of half of the $900 million ceiling. The all time highest level of funding was in 2001 at $995 million, and the lowest level of funding over the period was in 2008 at only $255 million. The consistent authorization and funding of the LWCF to these levels suggest that it was effective during this period, despite it only realizing its full funding potential once.

Most of the funding during this period was allocated for federal land acquisition, averaging $217 million annually, and the states were largely excluded from the LWCF, receiving an average of only $71 million annually. The lowest level of state funding was a mere $19 million in 2009. The funding discrepancy deviates from the original intent of the LWCF, but is somewhat aligned with the 1976 revised focus on federal funding. The lack of state funding sparked controversy around the LWCF and fueled opposition to the reauthorization of the LWCF in 2015. The lack of state funding for small, localized projects deviates from the intent of the LWCF to increase recreation opportunity for urban and suburban populations because it means that the majority of LWCF money will not fund pools, ballparks, boat launches, or any of the other low-cost, high impact projects that take place at the state and local levels.

This period also saw a rise in LWCF money being used for federal purposes other than land acquisition. Since the LWCF does not explicitly define special purposes that the LWCF may be used for, presidential administrations have requested Congress to authorize special purpose funds for a variety of programs. These programs have been generally aligned with the conservation and outdoor recreation spirit of the LWCF. These special purpose funds have been used for the maintenance of agency facilities, the Interior Department’s Payment in Lieu of Taxes Program, the Forest Service’s Forest Legacy Program, and several Fish and Wildlife Service programs. Since 2008 special purpose funds have been used primarily by the Forest Legacy Program and the Cooperative Endangered Species Conservation Fund(CRS Report). From 2001 to 2019 special purpose funding averaged $137 million annually and even surpassed federal land acquisition funding from 2004 to 2008 (CRS report). Special purpose funding is a clear deviation from the codified intent of the LWCF. While they may reflect the general intentions of the LWCF, they do not follow the intent of the actors responsible for the enactment of the policy.

#### Land Acquisition

From 2001 to 2019, the landholdings of the National Parks Service increased by only 1.5 million acres. State parks increased in acreage by approximately 1.5 million acres from 2000 to 2015 (the last year that data is available) (State park stat report linked in excel). Over the same period, the Forest Service’s landholdings increased by only 0.5 million acres. However, this increase mostly comprised of acquisitions within existing National Forest units. Approximately half of this land increase was in eastern states. While all land acquisition may not have been funded by the LWCF, the acquisition ratio between east and west is far from the 85% east of the 100th meridian requirement set forth by the law meaning that the LWCF was ineffective at ensuring that land acquisition for outdoor recreation in the east was substantial. Additionally, the lack of increase in Forest Service units in the east, where most population centers are, over this period suggests that the agency did not meaningfully reallocate recreation resources to be more accessible to urban and suburban populations.

The National Park System did not meaningfully increase recreation opportunity for urban and suburban populations from 2001 to 2019. Recreation visits to metropolitan lands [[3]](#footnote-3) administered by the National Parks Service over that period increased by 25 million visitors, while the increase in visits to non-metropolitan lands increased by 21 million visitors. Compared to the overall number of visitors during any given year during that period, the 4 million increase difference is negligible.

# Conclusion

This study set out to determine whether the Land and Water Conservation Fund had been an effective conservation policy from 1965 to 2019. Specifically, it examines the LWCF’s purposes and outcomes in the periods between 1965 and 1977, 1977 and 2000, and 2000 and 2019. These periods were examined in accordance with the original mission of the ORRRC, the advisory body that suggested the LWCF originally, to determine America’s outdoor recreation needs in the years 1977 and 2000, as well as the consideration that the LWCF was significantly amended in 2019 and 2020, making its evaluation thereafter impossible at the time of writing.

To address these questions, a framework of policy evaluation was constructed out of the body of academic literature on policy evaluation in the abstract, the behavior of congressional elites, and on the evaluation of conservation and environmental policy specifically. Various models of policy evaluation were considered, and it was decided that the “goal-achievement” model was best suited for this evaluation. The motivations of elites were qualified and prioritized to aid in the understanding of the purposes of the LWCF during each of the three periods of evaluation. Conservation policy evaluation was examined, with emphasis on the unique challenges facing the sect of evaluation. A considerable issue facing the evaluation of the LWCF is the lack of a control variable to measure outcomes against, and it was decided that assuming the counterfactual to assess the scope of impact was the most suitable alternative.

An examination of relevant data determined that the LWCF was an effective at producing outcomes in alignment with its purpose from 1965 to 1977. It is clear that the LWCF was regularly funded and authorized, and that the funding level was appropriate. Furthermore, the funding was allocated in accordance with the intention of the law, with the majority going towards state grant programs. The LWCF also increased the availability of recreation land and opportunity during this period. The fund was appropriately used to acquire federal land to maximize recreation opportunity, and state grants were utilized to relatively good effect. Municipalities seemingly did not realize the full potential of the LWCF, but data reporting inconsistencies cast doubt on the reliability of that claim. States were able to effectively employ LWCF funds to foster recreation opportunity, especially in the east, and recreation opportunities became more widely available to urban and suburban populations.

From 1977 until 2000 the LWCF was a minimally successful program that only meaningfully contributed to its purposes by mitigating a federal land acquisition backlog. It was regularly funded to a considerable level at first to respond to the federal land acquisition backlog. Afterwards it continued to receive mean but was not funded near its maximum level of $900 million. However, the state grant program funding was cut significantly, and the LWCF was therefore an ineffective program at the state level. The federal governments recreation land holdings generally increased over the period. Additionally, there was a considerable uptick in land acquisition during the years of high funding, suggesting that the land acquisition backlog was sufficiently addressed. Recreation opportunities on federal land near population centers were insignificantly increased. The Forest Service did not acquire additional units in the eastern U.S. where most population centers are located and the National Parks Service only slightly increased visitation at metropolitan parks.

The LWCF was an ineffective program from 2000 until 2019. The overwhelming majority of LWCF funds were appropriated for federal use however, and the states were left with only a small fraction of LWCF money. This funding divergence is a clear deviation from the original intent of the LWCF, but is someone reconciled by the federal-focused amendments to the LWCF passed in 1976. It is notable that the lack of state funding was the cause of political turmoil surrounding the reauthorization of the LWCF in 2015 that led to its temporary expiration. The LWCF was an ineffective land acquisition program during this period. The lack of state funding means that state land increases are irrelevant, they certainly were not paid for with LWCF money. Furthermore, the federal government only trivially increased its recreation landholdings. The land that was purchased additionally was not in accordance with the LWCF provision that 85% of federal land acquisition be in the eastern U.S.

These findings suggest that the LWCF needs to be revised if it is to be an effective land conservation and outdoor recreation policy. Guidance for appropriate revisions would be found in the original text and purpose of the law, as well as an updated assessment of the recreation needs of Americans in the 21st century. Additionally, a further evaluation of the LWCF should be conducted in 2030 to determine if the *John D. Dingell Jr. Conservation, Management, and Recreation Act of 2019* and the *Great American Outdoors Act of 2020*, both of which amended the LWCF, have made significant changes to its purposes and if its outcomes are in alignment with those purposes, as well as reasonably with the original intention of the law.

A further evaluation of the LWCF would also be well served to include an evaluation of recreation participation among Americans and to what extent that recreation takes place on lands that the LWCF was responsible for acquiring. Unfortunately, insufficient data to answer this question was available at the time of writing and it was therefore not included in the evaluation, despite it being an important motivation of the LWCF. An additional limitation this study faced was data availability more generally. Unfortunately, most of the data from before 2000 is not digitized meaning that it is tedious to analyze because it cannot be reliably done electronically. Some records kept between 1965 and 2000 are not readily accessible as well, they are likely only found in hard copy at the office of the agency, if they exist at all.

Outdoor recreation has been a favored leisure activity and a fundamental connection to the land and environment for Americans since the turn of the 20th century. It is vital for the physical and mental health of the U.S., as well as the conservation and protection of the environment, that the lands upon which these activities are engaged in are protected. It is the intent of this study to gauge the success of the U.S. in pursuing these ends. In doing so, it is hoped that the feedback for the improvement of current and future outdoor recreation and conservation policies is heeded so the pastimes of hunting, fishing, hiking, and simply enjoying the outdoors on public land may be enjoyed by generations to come.

1. An inconsistent number of municipalities reported data to the Census Bureau, and it is unclear if the same municipalities were reporting each time. [↑](#footnote-ref-1)
2. The eastern U.S. is defined here as states residing in the U.S.F.S. regions 8 & 9, with closely align with the 100th meridian. [↑](#footnote-ref-2)
3. Metropolitan lands are defined for this study as those that are either urban, suburban, or mixed area by the National Parks Service. [↑](#footnote-ref-3)