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Long-Term Stewardship of Contaminated Sites

Trust Funds as Mechanisms for Financing and Oversight

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Executive Summary

In recent years, there has been increasing interest in the "long-term stewardship" of lands contaminated with hazardous substances. Although different people and organizations may define long-term stewardship somewhat differently, in general it refers to the set of activities that need to be undertaken at contaminated sites, including sites used for disposal of hazardous wastes, after site remediation or cleanup has been implemented. Long-term stewardship issues typically arise in the context of sites and facilities regulated under the two major federal statutes that address hazardous wastes and the contamination of land—the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), better known as Superfund, and to a lesser extent the Resource Conservation and Recovery Act (RCRA). However, the need for long-term stewardship can arise at any contaminated site. These issues arise not only at sites owned and operated by private companies, as is the case at the majority of sites on the U.S. Environmental Protection Agency's (EPA) National Priorities List (NPL), but at sites that are the responsibility of the federal government as well. The most expensive of these latter sites, referred to as "federal facilities," are those owned by the Department of Energy (DOE). The other federal agency with many sites warranting cleanup under Superfund is the Department of Defense (DOD).

Long-term stewardship activities are needed at sites where contamination remains at levels that preclude the unrestricted future use of the land or its affected waters (both surface water and groundwater). Core elements of stewardship include the following:

- site monitoring and maintenance,
- application and enforcement of legal or other mechanisms (often referred to as institutional controls) to restrict land and water use,
- information management,
- environmental monitoring, and
- emergency responses and financing when remedies or controls fail.

While the need for long-term stewardship has become more widely accepted, major issues remain about how to pay for it, exactly what activities are included, and who will be responsible for assuring that these activities are in fact implemented. One possible institutional mechanism for assuring long-term funding is the creation of trust funds to pay for and oversee stewardship activities. In this report, we examine the strengths and weaknesses of three kinds of trusts: federal trust funds, state trust funds, and private trust funds. The ultimate question is whether the resources needed for stewardship will be available once the spotlight on cleanup has been turned off. What makes stewardship an unusual and especially difficult problem is the time horizon involved: at some sites (particularly those contaminated with radionucleides and other long-lived contaminants), long-term stewardship activities will be required for many decades, if not hundreds or thousands of years. Thus, a robust and reliable stewardship system will have to endure changes in property use and ownership, as well as changes in politics and government institutions. Assuring funding over such long time periods is an unprecedented and daunting problem—one that calls for innovative solutions (or innovative adaptations of familiar solutions).

Criteria for evaluation

To compare the strengths and weaknesses of different kinds of trusts in addressing financing and oversight of long-term stewardship, we use five evaluative criteria. Each of the criteria addresses the characteristics of a successful long-term stewardship program. The five criteria are as follows:

1. financial security;
2. clear rules, roles, and responsibilities;
3. public information;
4. enforceability; and
5. permanence.

We evaluate each of the three types of trust funds against these criteria. This evaluation is based on our judgement, which is informed by reviewing the literature on each type of trust, examining the record of specific examples of each, and interviewing experts.

Three kinds of trust funds

The trust funds that might serve as models for institutional mechanisms to assure long-term stewardship fall into three basic categories: private trusts, federal trust funds, and state trust funds.

Private trusts

A private trust is a special kind of legal and financial arrangement for managing property, whether the property is land, money, or other economic assets. The specifics of private trust law vary from state to state. A private trust separates the benefits of owning property from the burdens—or, to put it another way, it separates the use of property from its ownership. The benefits are separated from the burdens by assigning them to different parties—beneficiaries and trustees, respectively. The legal title belongs to the trustee, who has a fiduciary obligation to manage the property for the benefit of the beneficiary. The essence of a trust is this relationship between three basic elements: the beneficiary, the trustee, and a particular piece of property.

After a private trust has been created, it is administered by the trustee(s). Much of the law of trusts, both judicially made and statutory, is about the powers, duties, and liabilities of trustees in performing their administrative tasks. In addition to the general duty to make the property productive, for which they often have wide discretionary powers, trustees have other well-established legal duties, including the duty of loyalty to the beneficiary; the duty to earmark funds by separating trust assets from other assets; the duty to account, including providing information, keeping records, and explaining actions; and the duty not to delegate actions to others (nontrustees) except under limited circumstances.

Charitable trusts are a particular kind of private trust and share many of their basic features, but differ in a few respects. Unlike private trusts, the beneficiaries of a charitable trust cannot be private or individual, and they may include governmental organizations. A charitable trust is a trust for charitable purposes: that is, purposes that are beneficial to a community or public as a whole rather than to private or individual interests. Charitable purposes include poverty relief, education, religion, and government, along with other activities considered "generally beneficial to the community." Although private trusts can be enforced through legal action taken by the beneficiaries, charitable trusts can be enforced only by a state's attorney general (though in some states charitable trusts are also directly

supervised by state courts). Charitable trusts are more likely to be able to endure over long time periods than private trusts and can be structured in such a way as to respond to changing circumstances; in addition, as nonprofit organizations, charitable trusts may have certain tax advantages. (In this report, we often use the term "private-charitable trusts" because of their shared features. Strictly speaking, however, all charitable trusts are private trusts, while not all private trusts are charitable trusts.)

Federal trust funds

Federal trust funds are not really trusts in the traditional sense and are, in fact, record-keeping devices rather than money in the bank. Although they share the three-part structure of private trusts—with beneficiaries, trustees, and property—federal trust funds differ in important ways.

- The government (the trustee) can unilaterally change the terms of a trust fund's administration—both its revenues and its expenditures—by passing new legislation, whether or not the public (the beneficiary) agrees.
- The assets of federal trusts are both owned and managed by the government, so the benefits and burdens of ownership are not legally separated, as they are with private trusts.
- The assets can be commingled with other government finances, rather than earmarked and used for certain purposes only.
- The government does not have a fiduciary duty to the beneficiaries.

The reason to create a federal trust fund is often more political than financial. Creating a trust fund is one way for supporters of a program to reduce their competition for annual funding: it separates a program's income and expenditures from the rest of the budget and attempts to lock in a long-term policy commitment for the future.

State trust funds

State trust funds typically share features of both federal and private trusts. Like the federal government, state governments have passed legislation creating trust funds for a wide range of purposes, including environmental and natural resource management. Some state trust funds have been financed directly by government appropriations; others have relied on earmarked taxes or fees. Another similarity with federal trust funds is that state governments can alter state trust funds through legislation, which may weaken the funds' financial security and assured purpose over the long term. On the other hand, state trust funds can be insulated from lawmakers' tampering if they are established by constitutional amendment, and in any case they are clearly less vulnerable to federal intervention than federal trust funds.

Conclusions

How does each of these three types of trust funds measure up to our five criteria? We summarize our findings in Table ES-1.

Federal trusts versus federal funds

Experience indicates that creating a federal trust fund would not assure the financial security of long-term stewardship. For this reason alone, we do not recommend pursuing this model any further. Still,

Table ES-1. Evaluation of three kinds of trusts for long-term stewardship of contaminated sites

	Criteria				
Trust funds	*Financial security*	*Clarity*	*Public information*	*Enforceability*	*Permanence*
Federal	Low	Medium to high	High	Low	Low
State	Medium	High	High	Medium to high	Medium
Private-charitable	High	High	Medium to high	High	High

the logic of having federal dollars pay for long-term stewardship of federal sites is compelling to state and local governments, as well as to local citizens; that is what has made federal trust funds sound so appealing. But who pays does not depend on or determine what kind of trust fund is created. Federal dollars could be used to finance a state trust fund or to finance a private-charitable trust, at least in theory. However, further legal research needs to be done to explore the authority of federal agencies to finance a trust fund. If these agencies do not have the authority to contribute funds to a state or private-charitable authority, this authority needs to be explicitly established. There are a number of interesting options for how a federal agency might finance stewardship trust funds, assuming that this authority is confirmed or established. One possibility would be for the Department of Energy and the Department of Defense to fully fund a few trust funds each year. This would eliminate any uncertainty about future funding. Another option would be for agencies with responsibility for stewardship at federal facilities to set aside a certain percentage of their environmental program costs each year and put it in a stewardship trust fund. For DOE, whose Office of Environmental Management has an annual budget of approximately $6 billion, that would amount to a tidy sum. This approach could work at privately owned sites as well: responsible parties could be asked to put a percentage of site study and cleanup costs in a trust fund for future stewardship activities.

The promise of private-charitable trusts

Perhaps the major lesson about private-charitable trusts for long-term stewardship is the usefulness of their basic legal structure: they provide a well-established way to allocate economic assets while at the same time setting enforceable rules for how, and by whom, those assets must be managed. In other words, these trusts combine financial management with procedures for oversight and accountability. This lies at the heart of long-term stewardship of contaminated sites.

The central feature of private-charitable trusts is the trust agreement—the written document that spells out the rules for use and management of property and clarifies the relationship among different actors and organizations. When these actors include a range of local, state, and federal government agencies, such clarification is certain to be a major challenge, but one worth meeting. Private trust arrangements have been successfully used to address complex intergovernmental issues, including environmental issues.

Another advantage of private-charitable trusts is that financial security—another major goal for stewardship—is fairly high, since the assets set aside in a trust must be managed according to the specific rules of the trust agreement, as well as the general principles of trust law. Charitable trusts

also appear to be an attractive mechanism for assuring public information and oversight of stewardship activities, as these requirements can be spelled out in the trust agreement. In addition, private-charitable trusts can facilitate involvement of all levels of government and other stakeholders if these interests are represented among the trustees.

Clearly, private-charitable trusts are a viable mechanism for addressing stewardship at privately owned contaminated sites. They are an option for federal facilities as well, but because it may be more difficult to muster the political will to get federal funding of a private-charitable trust, it is probably unlikely (although not impossible) that private trusts will be the "trust of choice" for contaminated federal facilities. Because private and charitable trusts are creatures of state law, those interested in creating these types of trusts will first need to examine the specific provisions of the relevant state law. Amendments to state law may be required to set up effective trust funds for long-term stewardship.

State trusts—an interesting hybrid

State trusts can offer many of the benefits of both federal and private-charitable trusts and thus are an interesting hybrid. Although state trusts are generally at the mercy of politics at the state level, states have used trust funds for a long time to set aside funds for particular programs. A state trust agreement could be tailored to the specific needs of long-term stewardship and the particular issues at a contaminated site. Because trust law differs from state to state, the creation of state stewardship trusts may be easier in some jurisdictions than in others.

Especially for federal sites, the notion of a state trust to finance and oversee long-term stewardship is appealing. Government at all levels has a strong role to play in making sure that contaminated sites are appropriately managed, and it may be easier for federal agencies to get approval to fund a state trust than to fund a private trust. State trusts make sense for federal sites as well because at many of these sites it is state agencies that help oversee federal actions, along with EPA, and the states have an incentive to hold federal agencies accountable for performing the necessary stewardship activities.

It is not clear whether state trusts are as attractive an option for private sites. On the one hand, the states themselves are responsible for long-term operations and maintenance activities—a subset of long-term stewardship—at many Superfund sites (specifically, those where cleanup actions were paid for out of the Superfund Trust Fund). Creating a state trust fund to finance long-term stewardship at these sites would not accomplish the goal of separating oversight from the responsibility for implementation—one of the desired features of an effective oversight institution. Thus, where states themselves are responsible for implementing certain stewardship activities, as at those sites on EPA's National Priorities List (NPL) where EPA cleaned up the site with funds from the Superfund Trust Fund, accountability might be better served under a private-charitable trust arrangement. For NPL (or other) sites where private companies or local government are the responsible parties, either a state or a private-charitable trust could make sense.

Next Steps

In sum, it is clear that both state and private-charitable trust funds are very promising mechanisms for assuring financing and oversight of long-term stewardship—at either private or federal contaminated sites. A key issue, one that is not addressed in this report, is "where is the money going to come from?" Clearly, for federal sites the next step is to ascertain whether federal agencies have the

authority to contribute funds to a stewardship trust fund. For other sites, EPA must take up the challenge of whether to require responsible parties to fund stewardship trust funds.

Our goal with this report is to stimulate increased discussion about long-term stewardship at contaminated sites, and in particular about whether trust funds might be a useful mechanism for ensuring needed financing and oversight of stewardship activities. It is important to note, however, that in this report we likely raise as many questions as we answer—and that more work needs to be done to move this issue forward. Stewardship activities are crucial to assuring long-term protection of public health and environment at many sites—both federal and private—across the United States, as well as to assuring the credibility of federal and state environmental programs.

As is often the case, however, there are many important questions raised in this report that need further work and analysis. Based on our work, we recommend a number of studies and research projects, as well as actions, to move the issue of effective long-term stewardship forward.

1. EPA should develop, through regulation under CERCLA and RCRA, a coherent and transparent long-term stewardship program that spells out the required stewardship activities at all sites addressed under these two laws, as well as who—federal agencies, state agencies, local governments, or responsible parties—will be responsible for which stewardship activities.
2. DOE and DOD should ascertain whether they do, or do not, have legal authority to finance state or private-charitable trust funds, in this case, for financing and oversight of long-term stewardship. If they do not, they should seek such authority.
3. EPA, DOE, and DOD should fund an independent study to analyze the relevant trust law in states with many federal facilities and Superfund sites and assess the provisions of state trust law that would affect the creation of state trusts or private-charitable trusts for long-term stewardship.
4. EPA, DOE, DOD, and representatives from state and local governments should draft a model trust agreement for creating a long-term stewardship trust fund and consider whether it makes more sense to establish a single trust fund for each site (state or private) or to create state or regional trusts for all sites within a state or region.
5. EPA should fund a study to systematically document examples of state or private-charitable trusts used for cleanup and stewardship purposes at Superfund sites.
6. EPA and other federal agencies should assess how many Superfund sites (both federal and private) rely on institutional controls for assuring long-term protection and to what extent, and also explore whether a state or private-charitable trust fund might serve as an effective mechanism for monitoring and enforcing institutional controls.
7. EPA and other federal agencies should develop estimates of the annual costs of long-term stewardship for private sites and for federal sites, including the costs of monitoring and enforcing institutional controls.
8. Once legal authority to finance trust funds has been established, DOE and DOD should create a pilot program to finance long-term stewardship trust funds for federal facilities.

Chapter 1. Introduction

In recent years, there has been increasing interest in the "long-term stewardship" of lands that have been contaminated with hazardous substances. Although different people and organizations may define long-term stewardship somewhat differently, in general it refers to the set of activities that need to be undertaken at contaminated sites, including sites used for disposal of hazardous wastes, after site remediation or cleanup has been implemented. Long-term stewardship issues typically arise in the context of sites and facilities regulated under two major federal statutes that address hazardous wastes and the environmental contamination of land—the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), better known as Superfund, and to a lesser extent the Resource Conservation and Recovery Act (RCRA).[1] In addition, two laws governing nuclear waste facilities—the Nuclear Waste Policy Act and the Uranium Mill Tailings Radiation Control Act—address long-term stewardship in an explicit, albeit inconclusive, manner. Although the sites operated under these laws represent a minority of the sites requiring long-term stewardship, they represent the bulk of the sites where there is some experience with establishing long-term stewardship funds and operations. However, issues regarding long-term stewardship can arise at any contaminated site.

Long-term stewardship activities are needed at these sites when—even after a remedy has been implemented—contamination remains at levels that preclude the unrestricted future use of the land or its affected waters (both surface water and groundwater). Stewardship includes the physical and engineering controls, institutions, legal and scientific information, management practices, and other mechanisms needed to protect people and the environment after cleanup efforts have been completed. (This set of activities is also sometimes referred to as post-construction activities, because they take place after the remedy has been constructed.) Core elements of stewardship include the following:

- site monitoring and maintenance,
- application and enforcement of legal or other mechanisms (often referred to as institutional controls) to restrict land and water use,
- information management,
- environmental monitoring, and
- emergency responses and financing when remedies or controls fail.[2]

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[1] Comprehensive Environmental Response, Compensation, and Liability Act: 42 U.S.C. s/s 9601 et seq. (1980); Resource Conservation and Recovery Act: 42 U.S.C. s/s 321 et seq. (1976).

[2] For a description of most of these elements, see Chapter III of an earlier RFF Report, *Long-Term Stewardship and the Nuclear Weapons Complex: The Challenge Ahead*, by Katherine N. Probst and Michael McGovern, June 1998. See also Chapter 1 of *From Cleanup to Stewardship: A Companion Report to 'Accelerating Cleanup: Paths to Closure'* and *Background Information to Support the Scoping Process Required for the 1998 PEIS Settlement Study,* published by Office of Environmental Management, DOE/EM-0466 (Washington, DC: U.S. Department of Energy, October 1999).

Just five years ago, long-term stewardship was not a topic of discussion among those concerned with private Superfund sites or with the cleanup of the many contaminated sites and facilities owned and operated by the federal government, most notably the Department of Energy and the Department of Defense. Over the past few years, however, the topic has risen to some prominence. The reliability, monitoring, and enforcement of institutional controls are on the agenda of workshops and conferences across the country and are the subject of a growing number of reports and analyses. For privately owned Superfund sites, there is still a dearth of knowledge about what kinds of institutional controls are being used and whether these controls are in fact being implemented. Stewardship issues also arise in discussions about redevelopment of "brownfields" sites. The unreliability of institutional controls—and the need for robust institutions to assure long-term stewardship—are major concerns raised in a recent report by the National Research Council.[3]

Much of the impetus to look at these issues has come in the context of federal facilities—contaminated sites owned or operated by or for the federal government, many of which are being cleaned up under Superfund. The Department of Energy created its own Office of Long-Term Stewardship in November 1999, signifying the importance of this effort, and DOE's Office of Environmental Management has taken the lead in funding research and analysis on this topic, including this report.[4] Increasingly, stewardship workgroups are being formed at contaminated sites across the country.[5]

Exactly how many sites will need long-term stewardship is not known, but the numbers—and costs—could be staggering. There are more than 100 sites that are expected to require long-term stewardship by DOE.[6] No similar analysis has been done for other federal facilities or for private sites being addressed under Superfund. However, a large number of contaminated sites on the Environmental Protection Agency's (EPA) National Priorities List (the list of sites considered the most contaminated) will require postclosure care and monitoring. Similar activities may also be required at land disposal facilities regulated under RCRA.

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[3] *Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites*, National Academy of Sciences Press, August 2000, Washington, DC. See also John Applegate and Stephen Dycus, "Institutional Controls or Emperor's Clothes? Long-Term Stewardship of the Nuclear Weapons Complex," 28 *Environmental Law Reporter* 10631–10652, 1998. On private Superfund sites, see Robert Hersh et al., *Linking Land Use and Superfund Cleanups: Uncharted Territory*, RFF Discussion Paper, 1997; and Linda Breggin et al., *Protecting Public Health at Superfund Sites: Can Institutional Controls Meet the Challenge?* Research Report, Environmental Law Institute, 1999.

[4] The Department of Energy's Office of Long-Term Stewardship and its predecessor, the Office of Strategic Planning and Analysis, have funded a variety of research efforts and workshops on this topic. For example, see *Creating a Successful Long-Term Stewardship Program for Sites in the Nuclear Weapons Complex: Second Annual RFF Workshop on Long-Term Stewardship,* April 16-17, 1998, Washington, DC. See also *Long-Term Stewardship and the Nuclear Weapons Complex: The Challenge Ahead*, by Katherine N. Probst and Michael McGovern, RFF Report, June 1998. Other organizations active in this area include the Association of State and Territorial Solid Waste Management Officials, the Energy Communities Alliance, EPA's Federal Facilities Restoration and Reuse Office, the Environmental Law Institute, and the International City/County Management Association.

[5] See, for example, Stewardship Working Group, *Oak Ridge Reservation Stakeholder Report on Stewardship*, Vol. 1 (1998) and Vol. 2 (1999).

[6] Office of Environmental Management, *From Cleanup to Stewardship* (Washington, DC: U.S. Department of Energy, October 1999).

The question of who has the responsibility and the resources to monitor institutional controls and perform other long-term stewardship activities is a political hot potato, with federal, state, and local governments arguing about their respective roles. All agree that land use controls—the backbone of institutional controls—are usually a local responsibility. Yet local governments do not have any specific role laid out in legislation or regulation for assuring protection at contaminated sites. In a survey conducted some years ago by the Association of State and Territorial Solid Waste Management Officials, state officials made clear their view that local governments are responsible for monitoring and enforcing institutional controls.[7] Local government officials, not surprisingly, considered this the responsibility of the state and federal agencies that implement the nation's site cleanup programs. While local governments have a critical role in ensuring that institutional controls are complied with, they are not parties to the formal cleanup agreements that govern cleanup at either private or federal sites, unless they are responsible parties themselves.

Some responsibilities are spelled out by statute. For example, CERCLA clearly defines financial and legal responsibility for on-going operations and maintenance activities needed at individual sites: for sites cleaned up by EPA using monies from the Superfund Trust Fund, states are responsible;[8] for federal facilities, it is the federal agencies.[9]

Nevertheless, just who is responsible for monitoring and enforcing institutional controls remains unclear. And although financial responsibility for operations and maintenance activities is assigned by CERCLA, it is unclear what happens if implementation by states or private parties is inadequate. Under CERCLA, EPA is supposed to conduct five-year reviews of remedies at Superfund sites to ensure that the remedies are protective and are working as intended.[10] EPA is behind in these reviews, and the agency has acknowledged that the reviews themselves need improvement.

The growing concern about long-term stewardship is, of course, directly related to our recognition that some contaminated sites will never be fully "cleaned up," whether for technical, financial, or political reasons. Earlier projections were more optimistic: in the 1970s and 1980s many people thought that with enough money and technology, from both government and the private sector, contaminated sites could be returned to unrestricted use. As the Superfund program matures and more sites have reached the postconstruction stage, with remedies in place, the focus is turning to the next phase in the cleanup program—long-term stewardship. Long-term pumping and treatment of groundwater are needed, and caps built to contain contaminated materials must be monitored, maintained, and eventually replaced. The growing interest in redevelopment of brownfields also raises the stewardship issue.

While the need for long-term stewardship has become more widely accepted, it is an open question what mechanisms will be put in place to assure the public that activities needed to protect public

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[7] ASTSWMO, "State Cleanup Accomplishments for the Period 1993–1997," Final Report, 1998.

[8] There is one exception. EPA pays for and conducts what are referred to as "long-term response actions," that is, groundwater and surface water restoration measures (e.g., pump and treat, monitored natural attenuation) at Superfund lead sites for up to 10 years, at which point responsibility for these activities is turned over to the state.

[9] Letter from Steven Luftig, 9/29/00.

[10] *Comprehensive Environmental Response, Compensation, and Liability Act of 1980*, P.L. 96-510, sec. 121(c).

health and the environment will, in fact, be paid for and implemented once the spotlight on cleanup has been turned off. These concerns arise at both private Superfund sites and federal sites, although clearly there are a variety of situations, factual details, and levels of problems.

Purpose of the report

This report explores different mechanisms for financing and oversight of long-term stewardship activities, at both private and federal contaminated sites. What makes stewardship an unusual and especially difficult problem is the time horizon: at some sites (particularly those with wastes contaminated with radionucleides and other long-lived contaminants), long-term stewardship activities will be required for many decades, if not hundreds or thousands of years. Thus, a robust and reliable stewardship system will have to endure changes in property use and ownership, as well as changes in politics and government institutions. Assuring funding over such long periods is an unprecedented and daunting problem—one that calls for innovative solutions (or innovative adaptations of familiar solutions).[11]

Currently, stewardship at federal facilities is funded by Congress through annual appropriations from the federal government's budget. For private sites under CERCLA, the legal and financial responsibilities for operations and maintenance activities are spelled out in the statute, but who is responsible for other stewardship activities is not. Whatever post-construction, long-term stewardship activities are conducted by EPA are part of the agency's annual appropriation from Congress, but these costs (and responsibilities) have not been clearly delineated. For most private sites, implementation of stewardship activities is the responsibility of private companies or state agencies. Regardless of who pays, the elements of a long-term stewardship program have not been clearly spelled out, and the associated costs have not been estimated for either federal facilities or private sites, although DOE has done the most in this regard. In short, annual funding from general revenues is the status quo.

If the costs of long-term stewardship are currently included in the annual federal budget, one might ask, Why worry about it? The main reason is that annual appropriations are almost certainly not a stable source of funds over the long term. For example, what drives appropriations for the "environmental" activities at Department of Energy and Department of Defense sites is the political and practical imperative to address the worst contamination. Once the more visible cleanup activities are completed and only stewardship remains, there is likely to be less public and political support for appropriating millions of dollars, year after year for an indefinitely long period, to pay for stewardship. Furthermore, annual appropriations are vulnerable to changing political and economic conditions, such as the relationship between Congress and the president, the attention span of politicians and citizens, and the general state of government finances. Long-term stewardship must continually compete in the budget process with other needs, programs, and interest groups, and funding therefore depends on pressure from local and state governments, as well as from elected federal officials. The current reliance on annual appropriations is at best a short-term solution to what is by definition a very long-term problem. Citizens and their local leaders who live near federal and private contami-

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[11] Some have suggested that the world's major organized religions are the only human institutions with proven capacities to endure for such long periods of time.

nated sites want to know who is going to implement long-term stewardship activities and protect current and future generations.

In this report we evaluate two components of the problem: financial, and legal and institutional. The *financial* aspect will ensure that funds needed for long-term stewardship activities are available both now and in the future. The *legal and institutional* aspects will ensure that stewardship activities will in fact be implemented in the future, and that those commitments can be enforced over time. Both of these components must be in place if there is to be real accountability, in both financial and political terms.

Our concern with accountability and enforcement explains the dual emphasis of the subtitle of this report: "financing and oversight." Adequate funding may seem to be the core issue for supporting long-term stewardship—the bottom line, as it were—and in fact funding and financial issues take up the greater part of our discussion. But our view is that funding issues are inextricably tied to oversight, particularly over the long time periods relevant to stewardship.

We focus on only one generic kind of financing and oversight mechanism—trust funds—and we evaluate the relative strengths and weaknesses of different federal, state, and private trust funds and trust arrangements. There are two reasons why we chose to focus on trust funds. First, over the past few years trust funds have frequently been suggested, in meetings and debates about long-term stewardship, as a potentially useful financial mechanism.[12] To our knowledge, however, no one has analyzed in a sustained way whether trust arrangements might actually provide a workable model, or how this model might differ for private versus federal contaminated sites. Second, trust arrangements offer a distinctive approach to combining the financial and legal aspects of managing property, including land as well as other economic assets. Trust law establishes legal rules and relationships for how property should be managed over time. This approach is based on centuries of experience, and it has already been applied to a wide range of circumstances, as discussed in the following chapter. And, perhaps most importantly, some trusts have endured for many decades—an essential characteristic for meeting the challenge of long-term stewardship.

General issues about financing

Some general considerations about financing have shaped our study. We considered three components of financing long-term stewardship, all of which must be addressed before establishing a funding mechanism.

- What is the *source* of the money: *Who* pays?
- What is the *structure or form* of funding: *How* is it paid?
- What is the *timing or schedule* of funding: *When* is it paid?

In theory, the alternative trust funds or trust arrangements examined in subsequent chapters could be financed under a variety of approaches; in practice, some legislative changes would likely be required in particular situations. Needless to say, these issues are strongly influenced by political factors.

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[12] See, for example, Note 4.

An issue we do not address is the question of how much money is needed to pay for long-term stewardship at federal facilities, private sites, or both. There has been some effort to at least begin to estimate these costs for DOE sites, but not for sites that are the responsibility of other federal agencies or for private sites addressed under the Superfund program. Although a critical component of any attempt to solve this problem, determining the price tag is beyond the scope of this report.

The *source* of the money or other assets to finance the trust fund can be the general revenues of governments— federal, state, or local—or a more specific source, such as a bond issue or a targeted tax or fee (e.g., the taxes used to stock the Superfund Trust Fund), or private companies. These general and specific sources, of course, can be combined. Federal trust funds, for example, could be financed out of the government's general revenues or by a specific, earmarked tax or fee. State trust funds could be financed by federal payments, the state government's general revenues, a targeted tax, or a bond issue. Similarly, a private or charitable trust could be financed by a number of sources, both private and public. For long-term stewardship, it is likely that different sources of funds will be more appropriate for federal facilities than for privately owned sites. Still, even within these two broad categories of sites, there is a range of alternatives.

The *structure* and *timing* of financing are closely related. All the funds could be collected at once, in a lump sum, or incrementally over time, say annually. A trust fund that was "fully funded" at its inception would generate the revenues needed each year for anticipated long-term stewardship activities. For example, a long-term stewardship trust fund could be established by the federal government, which would make one large payment, up front, for one or more Department of Energy sites (although right now, the legal authority is unclear). For a private site, those who have paid for cleanup—"responsible parties" in the Superfund vernacular—could contribute a lump sum to a trust fund for stewardship activities at that site.

A different funding structure would be some kind of periodic fee or tax. In this case, revenues would be dedicated to long-term stewardship activities on a "pay as you go" basis. For ease of discussion, we refer to this as annual funding, though the exact period might vary. One version of annual funding would be income generated by some use of the property, such as commercial or real estate development. For example, at a brownfield site that is being redeveloped, a long-term stewardship trust fund might be stocked with a special assessment or impact fee, or a fee from a business improvement district.[13] Or the federal government, state governments, or private parties could pay annual fees to finance such a trust fund.

A third alternative is a hybrid funding structure: partial funding could be provided up front, and then annual revenues through a fee, tax, or appropriation could be added to the fund (or used directly to pay for stewardship activities). Each of the three alternatives provides a different level of security in ensuring that needed funds will be available in the future. Each may make sense in different circumstances, and each places different demands on the trustees who are charged with administering assets over time.

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[13] For a good overview of local public finance, see Robert Bland, *A Revenue Guide for Local Government*, International City Management Association, 1989. For a discussion of business improvement districts, see "Downtown Renewal: The Role of Business Improvement Districts," *Public Management* 77:2 (1995): 9–13; and "Bidding for Power," *Governing Magazine*, October 1999, pp. 28–31.

Issues of the structure and timing of financing have major economic and political implications. Although collecting all the necessary funds up front might seem the most desirable solution, this may not, in fact, be the case. Up-front full funding may not be politically viable, compared with a more incremental funding approach, or it may be too expensive. (Of course, one could argue that this objection makes transparent the true costs of cleanups requiring stewardship, which may be the most important reason to at least estimate what it would cost to fully fund trust funds for these activities. Stewardship has become accepted policy, at least in part, because it is a less expensive approach than "complete" cleanup.) Moreover, even our best estimates are unlikely to pinpoint the eventual total costs of stewardship, so it may be foolhardy to attempt up-front full funding. In addition, uncertainty about future costs—and risks—may mean that societal resources are better spent on other pressing needs.

Finally, what kind of institutional mechanism is best suited to financing and oversight of long-term stewardship activities, as well as how much money is needed, depends to a large degree on the scale and portion of the problem. There are a range of possible examples: a national trust fund to finance all stewardship activities for all contaminated sites; separate trust funds for sites in different categories of ownership (federal, state, municipal, and private); regional or state trust funds; or state or private trust funds for individual sites. These possibilities run through our analysis of long-term stewardship financing and oversight institutions.

Caveats

Although we focus on trust funds in this report, it is nonetheless worth saying a few words about other institutional alternatives and potential financing approaches that we do not examine. We initially considered various kinds of government corporations (or public enterprises, such as the U.S. Postal Service, Fannie Mae, Amtrak, Tennessee Valley Authority, and Resolution Trust Corporation) but decided not to include them in this report because they generally provide some commercial or business-oriented service that generates revenues, which seemed inapplicable to stewardship.[14] We also considered special-purpose public or quasi-public "authorities," such as metropolitan transportation authorities, which typically have powers to raise fees or issue bonds, particularly to build and maintain infrastructure; again this seemed unlikely to apply to stewardship of contaminated land. However, some of the trust arrangements we discuss are similar to the public-private partnerships and intergovernmental relationships that characterize economic development organizations, and these similarities may well deserve further study.

Another set of financing and oversight tools we do not evaluate is the panoply of financial assurance and insurance instruments. Although these instruments may well provide useful mechanisms for long-term stewardship, we did not examine insurance instruments in large part because we did not feel we had the requisite expertise to do so. Finally, it is worth noting that this report likely raises as many questions as it answers. This report does not provide comprehensive information on all aspects of

[14] See Ronald Moe, *Managing the Public's Business: Federal Government Corporations*, Congressional Research Service, Library of Congress, 1995; and Jerry Mitchell, *The American Experiment with Government Corporations* (M.E. Sharpe), 1999.

financing long-term stewardship, nor can it address all of the questions that will need to be addressed. In the final chapter of this report, we suggest additional research that still needs to be done.

Methodology

Our research reflects the early stage of debate about the issue. This report represents the culmination of our research about the effectiveness of a range of trust mechanisms, based on interviews with experts about contaminated sites and trust fund arrangements, as well as a review of the relevant literature. Our research also builds on RFF's prior work on long-term stewardship and involvement in many workshops, meetings, and discussions about stewardship issues. Finally, and probably most importantly, our work benefited from the critical review and thinking of other people. Many experts on stewardship, contaminated site cleanup, and trust funds reviewed this report in draft. Our hope is that this report will draw attention to this important issue and perhaps inspire some pilot projects. Clearly, more legal and technical work is needed to create model trust agreements for contaminated sites, but we hope that this report takes us one step closer to that reality.

Outline of the report

In Chapter 2 we identify five criteria for evaluating institutional mechanisms for both financing and oversight of long-term stewardship. These criteria—financial security; clarity of rules, roles, and responsibilities of different parties; public information; enforceability; and permanence—represent what we see as the fundamental characteristics of a successful stewardship program. We then, in Chapter 3, outline the basic components of federal, private, and state trust funds and trust arrangements. In Chapter 4 we evaluate these trust fund alternatives against our criteria, and we summarize the strengths and weaknesses of each type for both private and federal sites. Finally, in Chapter 5, we present our conclusions, based on our analysis, about which types of trust funds appear most promising. We then suggest "next steps" to help advance discussion—and action—on assuring the financing and oversight of long-term stewardship at contaminated sites across the country.

Chapter 2. Trust Funds: Evaluative Criteria

Each of the various kinds of trust arrangements has different features, strengths, and weaknesses. To determine whether trust arrangements might be a useful institutional mechanism for assuring two essential components of long-term stewardship of contaminated sites—financing and oversight—we start by defining the criteria for evaluating the possible alternatives. These criteria embody the desired characteristics of an innovative stewardship institution (and thus they apply both to trusts and to other alternatives not examined in this report).

Our five evaluative criteria are as follows:

1. financial security;
2. clear rules, roles, and responsibilities;
3. public information;
4. enforceability; and
5. permanence.

The criteria overlap and are interrelated: some are more relevant to funding, others are more relevant to oversight, and some are relevant to both. *Accountability*, a fundamental issue in both financial and institutional terms, runs through several of the evaluative criteria (particularly numbers 2, 3, and 4) and is therefore not listed as a separate criterion. We mean these criteria to be goals as well as standards of evaluation; in other words, we do not suggest that they can be fully achieved.

Financial security

Because the challenge we are trying to address is to assure that the funds needed for long-term stewardship activities are in fact available in the future, the first criterion for evaluating alternative institutional arrangements is whether they provide financial security. By "financial security" we mean that there is a high degree of confidence that the necessary funds will be available for long-term stewardship when they are needed, even if that is many decades from now, regardless of changing political or economic conditions.

The best way to meet this criterion is to set aside the funds now and legally dedicate them so that they cannot be used for some other purpose. In the long run, however, even putting all the money in a trust fund up front is not as secure as it might seem. This alternative is subject to future rates of inflation and other investment risks, which may cause assets to lose economic value in the future (which also points to the importance of good trustees).

A weaker alternative would be to designate some future stream of income or revenue for long-term stewardship activities through, for example, some form of user fee, tax, or special assessment, or income from some use of the property. Although it may have the advantage of linking particular activities to particular parties, public or private, and thereby creating incentives for certain kinds of behavior over time, this approach does not provide as high a degree of financial security as simply putting aside all the money needed to fund future activities now.

Another alternative would be to obtain commitments, from government or private parties, to make payments in the future. The financial security of this third option would depend on its enforceability.

The financial security criterion applies whether the funding is site-specific or pooled at state, regional, or even national levels. If site-specific, then the administrative burden of evaluating financial security on a case-by-case basis will be heavier, but the circumstances of each site will be more clearly known. A pooled fund might offer flexibility and administrative economies but might also lead to competition for funds among sites.

Clear rules, roles, and responsibilities

The rules governing long-term stewardship and the roles and responsibilities of different parties must be clearly spelled out. This clarity is essential to ensuring that the program is transparent, efficient, and effective. The best way to meet this criterion is to have a written and legally binding agreement signed by all the parties that explicitly delineates what stewardship activities must be undertaken and when, which organization is responsible for them, what the stewardship funds can be used for, and finally, how the funds are to be managed. Reaching such an agreement, of course, is not easy.

The clarity of the written agreement is directly related to accountability and enforceability. Accountability of different parties and government agencies can be achieved only if there is no ambiguity about who is responsible for what, and under what time frames. In addition to describing such duties, the agreement might also include some incentives for participation in long-term stewardship activities and oversight, especially for local governments and nongovernmental organizations, whose financial and legal resources tend to be limited. The agreement should also spell out an amendment process so that it is possible to make any necessary changes to long-term stewardship activities, roles, and responsibilities.

Public information

Information is essential to an effective program to assure protection at contaminated sites, whether public or private. There are two components: information must be adequate for management purposes, and it must be publicly available and accessible. Because public access to information ensures accountability, the criterion of public information is closely related to the clarity of rules and enforceability criteria.

Essential information—what long-term stewardship activities are being implemented, how the funds are being used, and changes in the nature of contamination and risks at each site—must be available to both trust managers and citizens. Gathering this information requires continual and periodic monitoring.

Until recently, public access to information about environmental programs usually meant that documents were available at local libraries or some other government repository. In the 21st century, public access almost certainly includes making environmental and other information—for example, specific land and water use restrictions—available on the Internet. Nevertheless, given the long period over which stewardship activities will be necessary and the rapid evolution and change in computer systems, hard copies of documents are necessary as well. Public information requirements should also include strategies for communication and dissemination of information.

Enforceability

An institutional mechanism that ensures long-term financing and oversight must include enforceability: there must be some way to compel the entities responsible for implementing stewardship activities to fulfill their obligations in accordance with the written agreement. Absent some mechanism for enforcing compliance, we can have little confidence that long-term stewardship activities will in fact be implemented over time, or that funds will be well managed.

The question, then, is who can enforce such compliance, and in what arenas? At a minimum, the parties to a long-term stewardship agreement must be able to bring legal action against any other parties who do not comply with the agreement. Perhaps citizen suits should be allowed to encourage public oversight, and some government regulatory agency must also have legal authority to intervene. It will be necessary to determine which stewardship issues will be decided under federal, state, and local laws, depending on what institutional arrangements are selected. Such arrangements must address any significant differences of statutory and common law in different jurisdictions. Finally, in addition to both administrative and judicial remedies, directly political arenas remain essential for enforcement.

Permanence

A final component of an effective financing and oversight institution is that it must endure for as long as stewardship activities will be needed at contaminated sites. This time period is anywhere from decades to hundreds or even thousands of years. Even though no institution will last forever, we use "permanence" as our fifth and last criterion because it is the goal and intent of long-term stewardship. In more practical and operational terms, we define this criterion to mean that we have confidence that the institution can endure for at least 75 years. We choose this number because it is greater than an individual's adult lifetime, and therefore longer than one's planning horizon for retirement, and long enough to force consideration of one's grandchildren—that is, three generations.[1] We also define permanence as the ability to endure even when land is leased, sold, or transferred to a new owner, and when the uses of land change. Permanence, like the other criteria, includes both legal and financial aspects and must allow flexibility for amending and adjusting institutional arrangements over time.

We now turn to a description of different kinds of trust funds and trust arrangements.

[1] This period is significantly less than the seven generations characteristic of some Native American thought, and more than the 30-year definition of long-term care used under many EPA regulations, notably those in the RCRA program.

Chapter 3. Alternative Kinds of Trusts and Trust Funds

Trusts and trust funds have frequently been mentioned as possible solutions to the problem of paying for long-term stewardship of contaminated sites. "Set up a trust fund" is a suggestion made by experts and laypeople alike, and some examples exist where people have done just that.[1] The reason the trust fund concept is attractive is that many of us—perhaps wishing we had our own personal trust funds—envision a trust fund as a large pot of money, set aside from spending but generating income for years and years, providing financial security and independence.

Unfortunately for the clarity of the policy debate, however, there are several kinds of trusts that are often confused and mistakenly lumped together. In this chapter we examine three basic kinds of trusts: federal, private, and state. The first two are the most common and familiar, although it turns out that the third kind—state trusts—should get more attention in the context of long-term stewardship.

Federal trust funds are probably the most commonly mentioned option for long-term stewardship, particularly for the contaminated sites and facilities owned by the federal government, through agencies like the Department of Defense and the Department of Energy. And in fact, a trust fund is one of the major elements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), better known as Superfund.[2] The Superfund Trust Fund was created to pay for site investigation and cleanup of contaminated sites where no responsible parties can be found, or where the responsible parties do not cooperate. In the latter case, the federal government may seek to recover the government's costs through what is called "cost-recovery" litigation, after the fact. Although the taxing authority expired at the end of 1995, the Superfund Trust Fund was formerly stocked by three taxes on private companies and by general revenues.[3] Thus, federal trust funds have been created for sites that are not federally owned.

Private trusts are important because their fundamental principles and rules of trusts have been developed and established in the law. It is private trusts that have shaped the popular conception of what a trust fund is: the heir or heiress living in luxury on the proceeds of a trust fund established by rich parents or relatives, or the student whose college expenses are paid by an educational trust established by a grandparent. In this context we also look at charitable trusts and land trusts, which are variations or subcategories of private trusts. The specifics of private trust law vary from state to state.

Finally, *state trusts* share some features of both federal and private trusts. These trust funds are established or approved by state governments, just as federal trust funds are established by the federal government. However, the law governing state trusts, like much of private trust law, varies from state to state. In this way, state trusts reflect the federal system of government in the United States, with its complex relationship between state and national authorities.

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[1] Examples include the Department of Energy's Oak Ridge Reservation in Tennessee (though there is debate about whether this is a trust fund) and the Industri-Plex site in Massachusetts, both described in Chapter 4.

[2] 42 U.S.C. s/s 9601 et seq. (1980).

[3] *Footing the Bill for Superfund Cleanups: Who Pays and How*, Katherine Probst et al., (Washington, DC: Brookings Institute and Resources for the Future, 1995), pp. 14–15.

Because it is private trusts that have established the core principles of trust law, we begin by describing private trusts.

We then discuss federal trusts, which differ in several essential respects from private trusts. We end with a discussion of state trusts, which, while less well known, offer some interesting attributes that make them worthy of attention.

Private trusts (including charitable trusts and land trusts)

Private trusts are a special kind of legal and financial arrangement for managing property, whether the property is land, money, or other economic assets (in legal terms, both real and personal property). Private trusts were originally creations of the common law, imported from England some centuries ago, and as such the concept is much older than that of a federal trust. Much of private trust law has subsequently been codified in statutes, which vary by state.[4]

In legal terms the features of trusts are divided into two main areas: how trusts are created and how they are administered.[5] The essence of a private trust is to separate the benefits of owning property from the burdens—or to put it another way, to separate the use of property from its ownership. For example, in the case of stocks, the benefits of ownership include the income or profits generated by dividends; in the case of real estate, the benefits include rental income. In each case the main burden of ownership is the task of managing the assets. The benefits are separated from the burdens by assigning them to different parties, who are referred to as beneficiaries and trustees, respectively. The legal title belongs to the trustee, who has a fiduciary obligation to manage the property for the benefit of the beneficiary. The essence of a trust is this relationship between three basic elements: the beneficiary, the trustee, and a particular property.[6]

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[4] Thus, to the extent that state trusts seem like a good idea for contaminated sites, the particulars of the relevant state trust law will need to be examined.

[5] For legal treatises on trusts, see George G. Bogert and George T. Bogert, *The Law of Trusts and Trustees*, revised 2nd edition, 1978; Charles Rounds, Jr., *Loring: A Trustee's Handbook* (New York: Little Brown & Co. Law & Business, 1999); *Restatement (Second) of the Law of Trusts*, American Law Institute, 1959. For simplified overviews, see Robert Mennell, *Wills and Trusts in a Nutshell,* 2nd ed. (St. Paul, MN: West Publishing Co., 1994); Edward C. Halbach, Jr., *Trusts,* 11th ed. (Chicago: Harcourt Brace, 1990).

[6] According to Mennell's *Nutshell* (see Note 5), "a trust is an intentionally created fiduciary relationship with regard to property in which the legal title is in the trustee, but the benefit of ownership is in another person, the beneficiary" (p. 170). The word fiduciary is itself defined in terms of trust, though not only in the strictly legal sense of the word. According to the American Heritage College Dictionary, 3rd edition, *fiduciary* (adjective) means "of or relating to a holding of something in trust for another," and a fiduciary is "one, such as a company director, that has a special relation of trust or responsibility in certain obligations to others."

Assigning benefits and burdens to different parties involves making a legal distinction between *legal* title (ownership) and *equitable* title (use of profits or income from the property). These distinctions may be obscure to the nonlawyer, but they reflect the historical origins and evolution of trusts in feudal England, when land law was riddled with complicated restrictions about who could own what kind of property and about how land could be transferred or conveyed. Trusts were legal mechanisms devised to get around these restrictions, by distinguishing and separating different kinds of title. On the historical background, see John Langbein, "The Contractarian Basis of the Law of Trusts," *Yale Law Journal* 105: 3 (December 1995).

Creating a private trust requires three parties: (1) the original owner of the property, (2) a trustee, to whom the owner transfers ownership, and (3) a beneficiary. Trustees are often financial professionals who manage property or assets for a fee. The specific terms of a trust are spelled out in the trust agreement (also called the trust instrument), which may be simple and straightforward or quite complicated. There may be more than one trustee and more than one beneficiary, and in fact trustees and beneficiaries may overlap to some degree.[7] For example, a parent might create a trust for all of his or her children, while naming one of those children to be the trustee as well. A trust relationship can exist only with respect to some specific property or assets, as opposed to other kinds of legal relationships between people that are not tied to property. (The latter kind of relationship is a matter of contract or tort law rather than trust law.) The property itself can be land, real estate, cash, financial assets, or other economic goods.

Once the trust has been created and the title to the property has been transferred from the original owner to the trustee, the original owner is no longer important unless that party retains some aspects or interests of trustee or beneficiary, as spelled out in the trust agreement. The legal requirements for the two remaining parties are that the trustee must be a person, corporation, or governmental unit capable of holding legal title, and the beneficiary must be capable of holding what is called equitable title.[8] The beneficiaries can be either private or charitable, depending on whether it is a private or a charitable trust. (Charitable trusts are discussed below.) Private beneficiaries must be specifically identified by name or constitute some well-defined class (e.g., "my descendants," or in the case of a contaminated site, those people living directly adjacent to the site). Beneficiaries have legal standing to take trustees to court to enforce the terms of a trust agreement. "Incidental" beneficiaries—third parties not named in the trust agreement—do not count and have no legal standing to enforce the terms of a trust. In theory, a private trust can last for an indefinitely long period, although there are legal rules limiting the duration of some of the beneficial interests it creates.[9]

After a private trust has been created, it is administered by the trustee. Much of the law of trusts, both judicially made and statutory, is about the powers, duties, and liabilities of trustees in performing their administrative tasks. In general, these powers, duties, and liabilities are determined by common law and statutory rules, although in a particular situation they can also be customized and spelled out in the trust agreement. Trustees owe a number of legal duties to beneficiaries, which is why beneficiaries can take trustees to court to enforce the terms of the trust. Third parties not included in the trust, however, are not owed the same duties as beneficiaries and therefore lack the same legal standing; they face many procedural barriers in efforts to bring claims against trusts or trustees. In short, the enforceability of a private trust depends on the beneficiaries' ability to go to court to defend their rights.

What are the legal duties of trustees? They usually have a general duty to make the property productive. What this means in practice depends on the nature of the property: whether it is land, other natural resources, real estate, stocks, money, or other financial assets. To fulfill this duty, trustees

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[7] The exception is that a sole trustee cannot be the sole beneficiary. This is true by definition, since it would dissolve the separate roles that characterize the trust relationship.

[8] See Note 6.

[9] This is known as the "rule against perpetuities," which varies in different states; see the works cited in Note 5.

often have wide discretionary powers, including the power to sell, lease, or mortgage property, as well as the power (and sometimes the duty) to invest in or improve the property. Courts typically judge trustees' behavior in this respect by the "reasonable person" standard that is familiar in other civil cases, or by the similar "prudent investor rule," which is meant to be flexible and reflect modern practices of financial management. However, the fact that trustees have *fiduciary* duties to beneficiaries often sets higher standards for trustee behavior, especially if the trustee is a professional.[10]

In addition to the duty to make the property productive, trustees have other well-established legal duties:

- to be loyal to the beneficiary;
- to earmark funds, by separating trust assets from other assets;
- to account, by providing information, keeping records, and explaining actions; and
- not to delegate actions to others (nontrustees) except under limited circumstances.

Charitable trusts are a kind of private trust but differ in several respects.[11] Like private trusts, charitable trusts have a three-part structure of trustee-property-beneficiary. Unlike private trusts, however, the beneficiaries of a charitable trust may *not* be private or individual, and may include governmental organizations. Instead, a charitable trust is a trust for charitable purposes: that is, purposes that are beneficial to a community or the public as a whole rather than to private or individual interests. Charitable purposes include poverty relief, education, religion, and government, along with the catchall area defined as "generally beneficial to the community." Thus, for example, there are charitable trusts for preservation of public parks and monuments. (In this report, we often use the term "private-charitable trusts" because of their shared features. Strictly speaking, however, all charitable trusts are private trusts, while not all private trusts are charitable trusts.)

Although private trusts can be enforced through legal action taken by the beneficiaries, charitable trusts, because they have no private beneficiaries with standing to sue, can be enforced only by a state's attorney general. In some states, however, charitable trusts are also directly supervised by state courts, which must approve changes in a trust's purposes or activities. Charitable trusts may be perpetual or last for an indefinite period, and as nonprofit organizations they may have certain tax advantages. Finally, charitable trusts may be more flexible than private trusts in changing circumstances, since the general charitable purpose of a trust may be carried out even if the originally specified purpose becomes impossible, illegal, or impractical. A private trust, in contrast, must be terminated if its specified purposes are no longer applicable.[12]

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[10] See Note 6.

[11] See the works cited in Note 5.

[12] See discussions of the *cy pres* ("as near as possible") legal doctrine in the works cited in Note 5.

Charitable trusts resemble private foundations in some ways. A private foundation, such as the Ford Foundation, is established for charitable purposes by a single donor (whether an individual, family, or corporation). According to federal tax law, a private foundation must have a program to award grants, as well as a system in which grants and administrative expenses are paid from the endowment (or endowment income) and not from fund-raising proceeds. For long-term stewardship purposes, an advantage of private foundations is that the donors have wide latitude over the foundation's goals and distribution of money. The disadvantage is that the performance of such foundations is hard to enforce from the outside, largely because they lack clear and identifiable beneficiaries. For this reason a trust is a better alternative for stewardship,

Land trusts are a particular kind of private, usually charitable, trust. Land trusts (also called land conservancies) are private, nonprofit, tax-exempt organizations whose purpose is to protect open, rural, or natural areas from future economic development. They are usually local or regional organizations, often connected to one another through wider national networks, such as the Land Trust Alliance. There are also a few examples with national and even international scope, such as the Trust for Public Land and the Nature Conservancy. In legal terms, a land trust is simply a charitable trust whose principal or sole asset is land. The term "land trust" is often used loosely, however, and not all land conservancy organizations are trusts in the legal definition.[13]

Land trusts work closely with both private landowners and government agencies. They use familiar tools of property law, land use controls, and tax law to acquire and hold parcels of land as well as conservation easements.[14] Many local land trusts favor keeping the land to be conserved in private ownership, though subject to legal restrictions on development (that is, with the trust owning an easement). Other land trusts prefer to acquire land temporarily and then transfer ownership to a government agency for the longer term. The latter strategy reflects the strengths and weaknesses of the different organizations: land trusts are typically more agile and flexible than government agencies in acquiring land but may be less capable of its long-term management than agencies with regulatory authority, technical expertise, and budgetary resources for management. On the other hand, agency missions may change over time.

Federal trust funds

In several basic respects, federal trust funds are patterned after private trusts. The federal government is the trustee, the public is the beneficiary, and financial assets of some kind are the property. However, there are also essential differences, and to understand them, we must first highlight several features of the federal government's budgetary practices and terminology.[15]

Federal funds and *trust funds* are the two major categories of accounts in the federal budget. Federal funds account for more than two thirds of the total budget and are used to pay for the majority of the

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since the trustees are governed by the trust agreement. See, for example, Victoria B. Bjorklund, "When Is a Private Foundation the Best Option?" *Trusts and Estates* 132(8), 1993; Paul K. Rhoads, "Private Foundations: Staying True to Donor Intent," *Trusts and Estates* 134(11), 1995.

[13] See Eve Endicott, ed., *Land Conservation Through Public/Private Partnerships* (Washington, DC: Island Press), 1993, and the websites www.lta.org, www.tpl.org, and www.tnc.org.

[14] An easement is a kind of limited property right. The holder of the easement typically is not the property owner, but has a right to use (or restrict the use) of the property. There are in fact two kinds of easements: positive (or affirmative) and negative. A positive easement gives the holder a right to use a particular piece of property in a particular way, for example, as a right of way to gain access. A negative easement prevents the owner from doing something with his property, or from using it in a particular way. A conservation easement, then, is a negative easement: a legal restriction on the development of land imposed by someone other than the landowner.

[15] This summary is based on the following publications: U.S. General Accounting Office, *Budget Account Structure: A Descriptive Overview,* GAO/AIMD-95-179 (Washington, DC, September 1995); Allen Schick, *The Federal Budget: Politics, Policy, Process* (Washington, DC: Brookings Institute, 1995); and *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2000,* from the *Budget of the U.S., Fiscal Year 2000*, online via Government Printing Office access at www.gpo.gov.

government's functions and activities. Federal funds include a number of subcategories, such as the general fund, special funds, public enterprise funds, and intragovernmental funds. For the purposes of this report, only the first two of these are relevant. The general fund, by far the largest subcategory, is used to carry out the general purposes of government. It provides most or all of the money for most budget accounts and is therefore the main object of competition among interest groups, government agencies, and programs during each year's budget process. Special funds, in contrast, are accounts whose resources are earmarked by law for specific programs or purposes; these resources usually come from the government's power to impose taxes, fines, or other fees. For example, by law a portion of the revenues from mineral leasing on the outer continental shelf is dedicated to the Land and Water Conservation Fund, a special fund for buying land for parks and recreation. Special funds are very similar to federal trust funds, but not identical.

Trust funds are the second of the two major account groups in the federal budget, amounting to about one third of total spending. The size of this category is due to the dramatic growth of social insurance and retirement programs since the Second World War—programs that are financed through trust funds. Federal trust funds are created for specific and usually long-term purposes and have receipts earmarked for those purposes, as defined by specific legislation or trust agreements. The receipts may come from one or more sources of revenue, including appropriations, taxes, and user fees. The relative importance of trust funds in the overall budget structure is lopsided: there are a few large trust funds—such as Social Security, Medicare, highway and airport transportation, and various federal employee retirement plans—and about a hundred smaller ones that add up to a very small percentage of the total.[16]

There is widespread confusion about the true nature of federal trust funds. Perhaps most important, federal trust funds are in fact record-keeping devices rather than money in the bank. By law, the balance (i.e., surplus) of a federal trust fund must usually be invested in U.S. Treasury securities. This means, in accounting terms, that a trust fund's "balance" is actually debt that the Treasury owes that fund—debt on which the Treasury must pay the fund interest. This debt is a government commitment (obligation) to pay, rather than cash or liquid assets. The debt securities "merely represent an intragovernmental IOU."[17] According to a government publication,

> These [trust] funds are not set up to be pension funds, like the funds of private pension plans. *They do not consist of real economic assets that can be drawn down in the future to fund benefits*. Instead, they are claims on the Treasury that, when redeemed, will have to be financed by raising taxes, borrowing from the public, or reducing benefits or other expenditures. The existence of large trust fund balances, therefore, does not, by itself, have any impact on the Government's ability to pay benefits.[18]

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[16] See U.S. General Accounting Office, *Budget Issues: Trust Funds and Their Relationship to the Federal Budget*, GAO/AFMD-88-55 (Washington, DC, September 1988); David Koitz and Philip Winters, *Federal Trust Funds: How Many, How Big, and What Are They For?* 96-686 EPW (Washington, DC: Congressional Research Service, June 30, 1998); and the citations in the previous note.

[17] Eric Patashnik, "Unfolding Promises: Trust Funds and the Politics of Precommitment," *Political Science Quarterly* 112 (1997), p. 435.

[18] *Analytical Perspectives, Budget of the United States FY 2000,* p. 337 (emphasis added). See also the other citations in Note 15.

Federal trust funds differ from private trusts in other ways as well:

- Most important, the government can unilaterally change the terms of a trust fund's administration—both its revenues and its expenditures—by passing new legislation, whether or not the beneficiaries agree. Thus the government is not bound by any trust "agreement." The beneficiaries, who are the public, can protest such government action only in the voting booth.
- The assets of federal trusts are both owned and managed by the trustee (i.e., the government), so the benefits and burdens of ownership are not legally separated, as they are with private trusts.
- The assets can be commingled with other government finances rather than earmarked for certain purposes only.
- The government does not have a fiduciary duty to the beneficiaries.
- In federal budgetary terms there is little substantive difference between a trust fund and a special fund, in that both are accounts earmarked for specific purposes. Whether a particular federal account is a "trust fund" depends simply on whether Congress called it that in the legislation creating it, and congressional practice in this area is often arbitrary or inconsistent.[19] Once the legal designation has been made, however, there is an important financial consequence: trust funds can earn interest on their balances (paid by the Treasury), but special funds cannot.[20] Thus, a trust fund has an advantage over a special fund, but even so it is vulnerable to unpredictable congressional action.

In sum, then, federal and private trusts share little more than the name and a general idea.[21]

Besides differing in their legal and financial details, federal trust funds have important political and strategic aspects.[22] A major goal of participants in the budget process—whether they are public or private interest groups, politicians, or government agencies—is to get their program removed from the general fund so that they do not need to compete for appropriations every year. Supporters of a given program typically prefer to have funds specifically earmarked, with legal restrictions against

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[19] "There are no generally accepted governmental definitions to guide the Congress in designating an account a trust fund account … federal programs similar to each other are inconsistently designated." U.S. General Accounting Office, *Budget Issues: Trust Funds and Their Relationship to the Federal Budget,* GAO/AFMD-88-55 (Washington, DC, September 1988), p. 6. Another government publication agrees: "There is no substantive difference between trust funds and special funds or between revolving funds and trust revolving funds. Whether a particular fund is designated in law as a trust fund is, in many cases, arbitrary." *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2000*, p. 335.

[20] Roy Meyers, *Strategic Budgeting* (Ann Arbor: University of Michigan Press, 1994), p. 140; Allen Schick, *The Federal Budget: Politics, Policy, Process* (Washington, DC: Brookings Institute, 1995), p. 105.

[21] On federal trust funds, see the works cited in Notes 15, 16, and 17. On private trusts, see the preceding section of this chapter.

[22] Roy Meyers, *Strategic Budgeting* (Ann Arbor: University of Michigan Press, 1994); Eric Patashnik, "Unfolding Promises: Trust Funds and the Politics of Precommitment," *Political Science Quarterly* 112 (1997), p. 435; and Irene Rubin, *The Politics of Public Budgeting: Getting and Spending, Borrowing and Balancing* (Chatham, NJ: Chatham House Publishers, 1990).

spending the money on anything not related to the program. Creating a trust fund is one way to accomplish this: it separates a program's income and expenditures from the rest of the budget and attempts to lock in a policy commitment for the future.[23] Making such a long-term commitment is a highly political issue, typically inviting strong opposition and conflict, as interest groups that currently have political influence try to institutionalize it. Another advantage of a trust fund's separate budgetary status is that its public visibility may increase, which makes it easier to monitor and increases accountability. In these respects, the significance of trust funds is often more political than economic.

The political context of trust funds is further illustrated by the debate about whether they should be "on-budget" or "off-budget." A program is on-budget if its receipts and expenditures are incorporated in the government's overall accounting of receipts and expenditures; a program is off-budget if it is defined in law as separate. Taking a program (such as a trust fund) off-budget may raise its public visibility, increasing government's accountability and helping protect the programs' funding from raids by competing interests. People who want to keep trust funds off-budget argue that it makes accounting rules clearer by showing the "true" size of the overall budget deficit (that is, the deficit for all government programs and activities that do not enjoy specific long-term financial commitments). From this perspective, including trust funds on-budget means that their balances (surpluses) are counted as government assets, which makes the total deficit look smaller than it really is. However, this argument for clarity and accuracy can be turned on its head: keeping all programs on-budget—in what is called the unified budget—gives a more complete and less distorted picture of the government's overall finances.[24]

Another kind of federal trusteeship is that governing "natural resource damages." Several federal environmental laws allow and in fact require certain government agencies to seek financial compensation from people or firms that have damaged publicly owned natural resources, including wildlife, vegetation, and ecosystems. These laws include CERCLA (Superfund), the Clean Water Act, the National Marine Sanctuaries Act, and the Oil Pollution Act. The agencies act as trustees in that they must assess damages, select remedies, collect financial compensation, and use the money collected—often deposited in a trust fund—to restore the environmental harm. To perform these tasks, the trustee agencies must define and implement specific rules and procedures. The Exxon *Valdez* oil spill in Alaska is probably the most famous example of natural resource damages assessment and legal action in the United States.[25]

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[23] In some circumstances another strategy might be to set up a government corporation or public enterprise, as mentioned in Chapter 1, at Note 14 and accompanying text.

[24] For more on this debate, see John Fischer, *Transportation Trust Funds: Budgetary Treatment,* 98-63 E (Washington, DC: Congressional Research Service, April 6, 1998); U.S. General Accounting Office, *Budget Issues: Trust Funds and Their Relationship to the Federal Budget,* GAO/AFMD-88-55 (Washington, DC, September 1988); and Allen Schick, *The Federal Budget: Politics, Policy, Process* (Washington, DC: Brookings Institute, 1995).

[25] Legal actions to recover natural resource damages have two distinct bases: one is the common law doctrine of the public trust, and the other is the federal environmental legislation already mentioned. CERCLA is the most important of the statutes in spelling out legal procedures, but it specifically prohibits Superfund money from paying for damage assessments. In contrast, the Oil Pollution Act created an Oil Spill Liability Trust Fund (partly funded by a tax on oil) which *can* be used to pay for assessments. See Anthony Chase, "Remedying CERCLA's Natural Resources Damages Provision: Incorporation of the Public Trust Doctrine into Natural Resource Damage Actions," *Virginia Environmental Law Journal* 11 (1992); Terry

Legal actions to recover natural resource damages can be a tool for compensating the public, and naming particular agencies as trustees may increase their public visibility and accountability. On the other hand, there have frequently been problems of poor coordination and overlapping jurisdiction among the federal, state, and tribal government trustees. There may also be conflicting interests for trustees who represent agencies that have a range of issues and concerns.[26] Furthermore, the methods used to assess and value damages and the costs of restoration have been strongly debated in both academic and political circles. In summary, the natural resource damages example illustrates an application of trust arrangements to problems of contamination, although it does not offer any particular lessons about long-term stewardship.

State trusts

Trust funds at the state level share features of both federal and private trusts. Like the federal government, state governments have passed legislation creating trust funds for a wide range of purposes, including environmental and natural resource management. Some state trust funds have been financed directly by government appropriations; others have relied on specially earmarked taxes or fees, including the proceeds from state lotteries. A typical example is the Michigan Natural Resources Trust Fund, which was established in 1976 and funded by earnings and interest from oil and gas leases on state lands. Like the nonprofit land trusts and conservancies, the state then uses the funds to acquire and protect land.[27] Other examples are state trust funds created to help pay for repair and cleanup of leaking underground fuel storage tanks, and to cover the closure of hazardous waste disposal facilities. A common limitation of such trust funds is that they often lack the money to fully meet their objectives.[28]

Many state trust funds, like federal trust funds, can be altered through legislation, which may weaken the funds' financial security and assured purpose over the long term. There are exceptions, however: some trust funds, including the Michigan Natural Resources Trust Fund and some of the school trust lands described below, are protected by state constitutional provisions. Because amending constitutions is more difficult and time-consuming than passing new legislation, trusts written into state constitutions are somewhat more likely to serve their original purpose well into the future. To

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Fox, "Natural Resource Damages: The New Frontier of Environmental Litigation," *South Texas Law Review* 34 (1993); Ray Kopp and V. Kerry Smith, eds., *Valuing Natural Assets: The Economics of Natural Resource Damage Assessment* (Washington, DC: Resources for the Future, 1993); and James Seevers, Jr., "NOAA's New Natural Resource Damage Assessment Scheme: It's Not about Collecting Money," *Washington and Lee Law Review* 53 (1996).

[26] See Kevin R. Murray, Steven J. McCardell, and Jonathan R. Schofield, "Natural Resource Damage Trustees: Whose Side Are They Really On?" *The Environmental Lawyer* 5(2), February 1999, and also the citations in Note 25.

[27] See Phyllis Myers, "Financing Open Space and Landscape Protection: A Sampler of State and Local Techniques," in *Land Conservation through Public/Private Partnerships*, Eve Endicott, ed. (Washington, DC: Lincoln Institute of Land Policy, 1993).

[28] See U.S. General Accounting Office, *Hazardous Waste: Funding of Postclosure Liabilities Remains Uncertain,* GAO/RCED-90-64 (Washington, DC, June 1990); and "Tank Owners Brace for Shift to Private UST Coverage," *National Petroleum News* 87:8 (July 1995). These issues are also addressed in the Nuclear Regulatory Commission's regulations for disposal of radioactive waste, in 10 CFR Part 61, and in the studies and Environmental Impact Statement that led to those regulations. We are grateful to Craig Dean of ICF Consulting for a useful memo on this topic.

the extent that state trust funds are controlled by state laws, they are, of course, generally immune from federal interference, though state-federal issues are always complicated.

State school trust lands (not to be confused with the nonprofit land trusts discussed earlier in this chapter), on the other hand, have more in common with private trusts than with federal trust funds.[29] School trust lands are owned and managed by the governments of most states in the central and western United States. The arrangements date from the 19th century, when the federal government made large grants of public lands to the newly established states from the Midwest to the Pacific Ocean. The revenues from those lands—whether from sales or other uses—were intended to help state governments finance public education systems as population and economic development increased.

In recent years, academic researchers have argued that the management of these state school lands—based on the legal principles of private trusts—is in many cases preferable to the management of federal public lands as practiced by such government agencies as the USDA Forest Service and the Bureau of Land Management.[30] Federal land management has often been criticized on political, economic, and environmental grounds because the agencies must satisfy many different interest groups, manage for the conflicting needs of multiple resource uses, and require government subsidies. In contrast, the basic management structure for state school lands is similar to the three-part structure of private trusts: there is a fiduciary relationship in which the trustees have various legal duties to manage property in the interests of the beneficiaries.

The assets of the state school trusts include both land and money. The trustees are the state governments, specifically the state land offices, and the public schools are the beneficiaries. The details of organizational structures and funding mechanisms of the land offices vary from state to state but may include different combinations of three kinds of assets: (1) the lands originally granted to the states by the federal government; (2) the proceeds from the sale or use of those lands; and (3) the so-called permanent funds that hold any proceeds not distributed annually. The land uses that generate revenues are mainly oil and gas extraction, forest exploitation, and livestock grazing. Some of these revenues (often those coming from renewable resources) are distributed directly to the public school system on an annual basis, while other revenues (often from nonrenewable resources) go to the permanent funds for later distribution.

Although state management of school lands is of course not exempt from political and economic pressures, it relies to a much greater extent on basic principles of trust law, such as clarity of goals, accountability, enforceability, and perpetuity.[31] Clarity of goals means that lands are managed for the specific needs of clearly identified beneficiaries. As trustees, the state government land managers must not only produce revenues in the short term but also preserve the *corpus* of the assets for long-

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[29] The following discussion is based on Jon A. Souder, Sally K. Fairfax, and Larry Ruth, "Sustainable Resources Management and State School Lands: The Quest for Guiding Principles," *Natural Resources Journal* 34 (Spring 1994); and Jon A. Souder and Sally K. Fairfax, *State Trust Lands: History, Management, and Sustainable Use* (University of Kansas Press, 1996).

[30] Ibid.

[31] These principles correspond closely to most of our own evaluative criteria in this report, which we arrived at independently.

term productivity.[32] By encouraging sustainability in both economic and environmental terms, these duties also contribute to the goal of perpetuity (as does the existence of the permanent funds). Accountability means that trustees are required to keep records, disclose information, and provide evidence of their performance. Public scrutiny of trustees for poor performance in the areas of clarity and accountability helps to ensure enforceability. Courts evaluate trustees' behavior by different and tougher standards than those they use to evaluate government managers. Trustees must live up to rigorous duties and standards of prudence, which courts may judge by the principles of trust law. Government managers, in contrast, tend to have substantial agency discretion within the limits set by legislative instructions, and courts tend to show deference to the government agencies as long as their actions appear to be within legislative parameters. Trust principles, in other words, encourage a stronger judicial role to hold legislatures and administrative agencies (as trustees) to their long-term commitment to resource management.[33]

Whether a state government creates trust funds through legislation or through agreements that are more like private trusts, the state's relationship with the federal government is always a complicated issue. The jurisdiction of federal agencies constrains the actions and authority of state agencies. We return to these issues in the following chapter, as we evaluate the suitability of different trust arrangements for long-term stewardship of publicly and privately owned contaminated sites.

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[32] Some of the clarity about how funds are managed—such as the fact that they are earmarked for specific purposes rather than going to a state budget's general fund—is due to the enabling legislation rather than to principles of common law.

[33] Other researchers with a free-market viewpoint also argue for private trust management of public lands instead of federal bureaucracies, though for more libertarian reasons; see Terry Anderson and Holly Lippke Fretwell, "A Trust for Grand Staircase–Escalante," *PERC Policy Series,* no. 16, 1999.

Chapter 4. Evaluating Different Trust Arrangements for Long-Term Stewardship: What Might Work?

In this chapter we examine federal, private, and state trusts in the context of long-term stewardship at contaminated sites.[1] We evaluate how well the different types of trusts might perform as funding and oversight mechanisms for long-term stewardship. We also discuss which trust arrangements appear to be most promising for privately owned sites and which for federal sites, and why. To do this, we return to the five evaluative criteria defined in Chapter 2: financial security; clarity of rules, roles, and responsibilities; public information; enforceability; and permanence. (Recall that the middle three criteria are all aspects of accountability.) We also provide some examples of each type of trust to illustrate their major strengths and weaknesses.

Evaluating federal trust funds

Although federal trust funds are frequently mentioned as a potential mechanism for setting federal money aside for long-term stewardship, by our evaluative criteria they have serious limitations. The most important limitation is that the federal government can unilaterally change the terms and conditions of such trust funds after they have been established. This means that the financial security they provide over time is more precarious than that of other kinds of trust funds. In addition, the assets of federal trust funds are not as available, or liquid, as “money in the bank”: the funds would be there when needed only if there was continued political support.

Much of the appeal of a federal trust fund is that it increases a program’s public visibility: it reflects and reinforces political commitment and support. This visibility helps meet the criteria of public information and some degree of accountability. Nonetheless, continued support is vulnerable to changing political and economic conditions, especially on a time scale of at least 75 years, or several generations. The political vulnerability of federal trust funds also undermines their performance with respect to our remaining three criteria: clarity of rules, roles, and responsibilities; enforceability; and permanence. In each case, federal trust funds have inadequate legal protection against changes in government policies.

Finally, federal trust funds are typically financed in large part by specific taxes that bear some relation to the service that the trust fund provides. For federal contaminated sites, it is difficult to imagine a tax or fee that would make sense or be politically acceptable, unless the property could be economically developed (as discussed in the following section). For private sites, it is unlikely that a new federal fee would be established: private industry was taxed to stock the Superfund Trust Fund, but these taxes have expired and there is tremendous pressure from industry to prevent their reauthorization. In theory, of course, this problem could be avoided if all the money were allocated up front.

[1] This could include waste disposal sites regulated under RCRA as well, although the discussion in this paper focuses primarily on those sites subject to Superfund.

The Highway Trust Fund is a good example of a federal trust fund that is as much a political as an economic endeavor. It was established by legislation in 1956, with the goals of providing federal money for building highways and related infrastructure, and also of protecting that spending from competition from other programs. The Highway Trust Fund's revenues come from the people who use and benefit from highways, through specially earmarked taxes on motor fuels and other vehicle-related expenses. The reliance on a form of user fees rather than the federal budget's general fund was a strategy to gain political support for establishing the fund in the first place. For the most part, the Highway Trust Fund has warded off budgetary competition from other programs for more than four decades, thanks to public support and the strong lobbying efforts of transportation interest groups. Nonetheless, Congress has occasionally responded to changes in national political priorities, as in 1982, when the law was changed to divert some of the revenues to mass transportation projects. As a matter of public policy, such changes may be desirable, but they illustrate the long-term vulnerability of even a well-defended federal trust fund.[2]

Other federal trust funds, such as the Airport and Airway Trust Fund, have not been as well protected. During the 1980s, disagreements between the authorizing committees and appropriations committees in Congress led to restrictions on the use of aviation trust fund monies. Furthermore, the authority to collect taxes for the Airport Trust Fund expired twice, in 1996 and 1997, for a total of 10 months, which cost the fund about $5 billion in revenues.[3]

In sum, a federal trust fund is subject to all the vagaries of the federal appropriations and political processes—the very limitations we are seeking to avoid in searching for an innovative long-term stewardship financing and oversight mechanism. Even when federal dollars should bear some or all of the funding burden, it probably makes more sense to incorporate the federal government as a party to some other kind of trust agreement, or simply to use federal money to help finance a state or a private or charitable trust fund.

Evaluating private and charitable trusts

Private trusts seem to meet several of our criteria for funding and oversight of long-term stewardship. Financial security is fairly high, since the assets set aside in trust must be managed according to the rules of the trust agreement, as well as the general principles of trust law. Those rules and principles cannot be changed unilaterally by any of the parties involved. Even so, financial security is never absolute because all investments are subject to some economic risks; one of those risks is inflation, although in theory a trust agreement could include some adjustment for inflation.[4]

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[2] See John W. Fischer, *Transportation Trust Funds: Budgetary Treatment* (Washington, DC: Congressional Research Service, 1998), and the citations in Chapter 3, Note 22. The Social Security Trust Fund, of course, is another example of the tremendous influence of political factors on a trust fund's financial viability. See the citations above and in Chapter 3, Notes 15, 16, and 17.

[3] See John W. Fischer, *Transportation Trust Funds: Budgetary Treatment* (Washington, DC: Congressional Research Service, 1998); and the citations in Chapter 3, Note 22.

[4] As noted in Chapter 1, whether the *amount* of the assets set aside is sufficient for long-term stewardship needs is a separate and obviously critical question, one that we do not address in this report.

Because private trusts typically have a written agreement, the rules, roles, and responsibilities can be clearly defined and customized; where the agreement is not entirely clear, there is a large body of trust law at the state level that can help fill in the gaps. These arrangements are generally enforceable by private beneficiaries in state courts, where the legal principles of trusts and the relationship between trustees and beneficiaries are well known to both lawyers and judges. However, enforceability of private trusts by public entities or other members of the public is weak or nonexistent.

Private trusts do not fare so well with respect to our two other criteria, public information and permanence. Although trustees are obligated to provide beneficiaries with adequate information, this obligation does not extend to the public in general, since the public is not legally considered a beneficiary. This limitation undermines the accountability of private trusts for purposes of long-term stewardship. Similarly, the law of private trusts limits the time that private beneficial interests can endure.

Private trusts have been used in an innovative fashion at some contaminated sites. The best-known example is the Industri-Plex site in Woburn, Massachusetts, a Superfund site contaminated from more than 100 years of chemical manufacturing and processing.[5] A "custodial trust" was created to aid in the redevelopment of this site. The trustees, who were designated by a federal district court, are responsible for holding and managing title to property that was transferred to the trust by the former owners, and also for selling all feasible parcels of land within a certain time. A portion of the proceeds from the sale of this property is retained in an escrow account for possible future remedial activities and other future costs.[6] As with private trusts in general, financial security is fairly high, as the trustees have a fiduciary responsibility to the Environmental Protection Agency and to the city of Woburn to promote development of the site and make money in the process. Furthermore, clear rules and responsibilities were established in the consent decree.

The Industri-Plex custodial trust has also fared better than other private trusts with respect to our third criterion, providing public access to information about the site. It has fostered participation in local events, meetings with local representatives, and attendance at public hearings about the site. This public information has focused on economic reuse of the site rather than on environmental remediation, although the remediation is a precondition for redevelopment.[7] In any case, because it is a Superfund site and subject to a judicial order, it is EPA, not the trust per se, that is responsible for requiring public information.

While Industri-Plex is a promising example, it is not without problems. Since the fiduciary duties of the trustees focus on promoting redevelopment at the site, there are legally binding agreements with prospective purchasers that effectively separate ownership and liability. Although useful for purposes of economic development, this separation may undermine accountability: after all, promoting redevelopment of a contaminated site may conflict with protecting public health. Finally, the custodial trust lacks permanence, since the money will last only as long as there is land to be sold. To be truly

[5] The Industri-Plex Site is a 245-acre property placed on the National Priorities List in 1983. For a detailed discussion of this site and its associated trust arrangements, see Katherine N. Probst and Kris Wernstedt, *Land Use and Remedy Selection: Experience from the Field—The Industri-Plex Site,* RFF Discussion Paper 97-27 (Washington, DC: Resources for the Future, 1997).

[6] United States District Court, District of Massachusetts, *Consent Decree, Civil Action 89-0196-MC*, 1989, p. 23.

[7] See Note 5.

effective for long-term stewardship, the terms of a trust agreement must reflect the long time period necessary for funding and implementing stewardship activities.[8] It should be noted, however, that the custodial trust was not set up with stewardship in mind.

Charitable trusts measure up somewhat better against our criteria than private trusts. Like private trusts, charitable trusts have fairly high degrees of financial security and clarity of rules, roles, and responsibilities. They are likely to be more effective than private trusts at providing public information, since charitable trusts allow and indeed require that some community, public, or government entity be named as beneficiary. Charitable trusts are also likely to be more permanent, since they are less restricted than private trusts by legal rules against perpetual beneficial interests.[9] In addition, the permanence of charitable trusts may be further aided by the tax benefits they enjoy as nonprofit organizations.

Enforceability is a more open question. In general, members of the public and other interested parties cannot sue to enforce the terms of a charitable trust, since only a state's attorney general can take legal action against the trustees. This has the advantage of screening out wasteful or trivial lawsuits, and an attorney general will presumably act to protect public interests. Nonetheless, it would be preferable to have additional measures of public oversight to increase accountability. In any event, just as the laws governing charitable trusts vary from state to state, they could be modified to expand opportunities for public participation and require public access to information. Such modifications could also be spelled out in a particular trust agreement, including monitoring schedules. In this respect, a charitable trust would be very similar to an innovative private trust arrangement like the Industri-Plex example described earlier.

Land trusts, which are a particular kind of charitable trust designed for the purpose of conserving land from economic development, provide an interesting and useful model for long-term stewardship. Although land trusts typically deal with lands that are environmentally healthy rather than damaged, their purpose clearly has a lot in common with the needs of long-term stewardship of contaminated sites. A good illustration of the common features is the set of guidelines for land stewardship published by the Land Trust Alliance; it contains detailed discussion of the following six practices:[10]

1. financing land stewardship: having money to manage property as opposed to simply acquiring it, which may include establishing an endowment, generating income from the property, and determining what the costs will be;
2. monitoring land trust properties, including marking boundaries;

[8] A more recent example of this private trust-based approach is an EPA-supported pilot study currently under way in Pennsylvania, to examine the possibilities of public-private partnerships for implementing land use controls. See Bruce Reshen–MGP Partners, "Land Use Controls: The Issues and Challenges," presentation at Eastern Stakeholders Forum on Land Use Controls at Federal Facilities, sponsored by International City/County Management Association and Center for Public Environmental Oversight, Arlington, VA, June 20, 2000.

[9] See Chapter 3, Note 9, and text accompanying Note 12.

[10] Land Trust Alliance, 1993, *The Standards and Practices Guidebook: An Operating Manual for Land Trusts*, Chapter 15, pp. 1–36. Compare this list with the description of long-term stewardship at the beginning of Chapter 1 of this report.

3. developing a land management plan that defines the site (including its history and descriptive inventory) and lays out management objectives for protection, use, and implementation;
4. administering land stewardship, including establishing stewardship policies, budgeting, recordkeeping, paying taxes and insurance, and correspondence;
5. maintaining community relations with neighbors, the wider community, and government agencies; and
6. having a contingency plan, which might include deed restrictions, dissolution provisions like those required of tax-exempt organizations, or a mechanism for separating conservation easements from land title and transferring them to another organization.

On the whole, land trusts measure up to our evaluative criteria for long-term stewardship in the same ways described above for charitable trusts—favorably. Their main disadvantage is that their expertise is in managing lands that are environmentally undamaged or uncontaminated. (Many land trusts exist to protect rural agricultural land, which may not be environmentally pristine but is a far cry from a Superfund site.) There may be portions of a contaminated site that has economic value or is not contaminated, and the proceeds from developing those portions could be used to finance cleanup or stewardship activities on the contaminated portions, as in the Industri-Plex case. This is a possibility at all different types of sites, whether they are federally or privately owned, cleaned up under Superfund or RCRA, or whether they are brownfields sites. Many land trusts have experience coordinating different land uses over time, including economic development and some forms of public access to undeveloped lands. We are not suggesting that existing land trusts be used for long-term stewardship, but rather that land trusts, because of their success across the nation, are a form of charitable trust that may be a workable mechanism for assuring financing and oversight of long-term stewardship.

Private and charitable trusts appear on the surface to be more appropriate for privately owned sites than for sites that are the responsibility of the federal government. For private sites where private parties are liable for cleanup, it would seem sensible to use private money to set up a private or charitable trust fund to assure funding of long-term stewardship. In fact, there already exist a smattering of examples where private trust arrangements have been used for just such a purpose. However, it is also possible that for sites where federal, state, or local government is the responsible party, private or charitable trusts may have a role to play, if not an exclusive one. For example, the federal government could fund a private or charitable trust to pay for the oversight of long-term stewardship, thereby assuring local citizens that stewardship activities will be implemented, and if not, that the lack of compliance will not go unnoticed. This might be an effective mechanism for assuring external accountability and credibility—something often lacking in federal agencies.

Evaluating state trust funds

State trust funds also seem to offer a promising mechanism for long-term stewardship financing and oversight. A state trust fund can be created by state law, using either government assets or earmarked revenues, in a manner similar to federal trust funds. (As noted earlier, different states have different provisions governing trusts.) One disadvantage of such state funds, like their federal counterparts, is that they remain vulnerable to future legislative action at the state level, which reduces their financial

security. This security would be increased if the trust fund legislation was incorporated into a state's constitution—not an easy task, but much more feasible than doing so at the national level.

State trusts share many of the positive features of private and charitable trusts and hence meet many of our other criteria for long-term stewardship. A trust agreement can be custom-designed for a particular contaminated site, or for statewide conditions. Trustees could be named to include representatives of local and state stakeholders, including nonprofit organizations. Federal government agencies could be parties to such an agreement, legally bound through a consent decree or similar document, although state authority over federal agencies is always a delicate and complex issue. In this way, if negotiations can be completed, the rules, roles, and responsibilities of stewardship can be clearly defined and information can be made publicly available. Stakeholders and interested parties at the state and local levels would have the incentives and at least some of the means to monitor the trust's management, which would then be as enforceable and permanent as a charitable trust. A trust arrangement along these lines would evidently have much in common with other innovative intergovernmental organizations and public-private partnerships.

One example of this approach is the recent agreement between Tennessee and the U.S. Department of Energy to deal with the federal facility at Oak Ridge. In late 1999, Tennessee reached an agreement with DOE to establish a fund for long-term stewardship for a specific area of the Oak Ridge Reservation, an on-site disposal cell for hazardous, radioactive, and mixed waste.[11] The agreement, which is a consent order, resulted from prolonged negotiations between DOE and the state Department of Environment and Conservation over the record of decision required by CERCLA for the Oak Ridge Reservation.

Tennessee initially refused to sign the record of decision or accept the construction of a new hazardous waste disposal facility on the site without a firm commitment from DOE to future funding to pay for the state's stewardship activities. The state Department of Environment and Conservation demanded that DOE pay into a "perpetual care trust fund" established under Tennessee law.[12] DOE denied the state's authority to issue such an order but eventually agreed to pay $1 million per year for 14 years into a fund managed by the state agency. The state will use the interest and other earnings generated by the fund to pay for long-term stewardship.[13] This fund looks a lot like a trust fund, although there has been some dispute about whether "trust fund" is the correct term.

Tennessee and DOE continue to disagree about several key aspects of the agreement. DOE has insisted that the fund is an "investment fund" because of concerns that it lacks express statutory authority to create a trust fund at the federal level; this apparently is why the two parties agreed to set up the fund under state law instead. DOE is also concerned that the agreement may be seen as a model or precedent for other contaminated federal sites. Probably the most important dispute is that DOE says its financial commitment is "subject to the availability of appropriated funds," an argument

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[11] State of Tennessee, Department of Environment and Conservation, and the U.S. Department of Energy, Consent Order, Docket No. 99-0438, November 2, 1999, pp. 3–4.

[12] Tennessee Code Annotated §9-4-603.

[13] See Note 12, and also Larisa Brass, "State, DOE Sign Cleanup Pact," *Oak Ridger*, Tuesday, November 2, 1999, at www.oakridger.com; Frank Munger, "Officials Agree on Facility to Dispose of Oak Ridge Cleanup Waste," *Knoxville News-Sentinel*, November 3, 1999, p. A1; and *Superfund Report*, November 10, 1999, p. 8.

that Tennessee rejects. The consent order itself does not resolve this question, but under federal law—particularly the Anti-Deficiency Act—the federal government cannot in fact make irrevocable commitments about future funding.[14] It is an open question whether DOE (or another federal agency) has the authority to finance a trust fund, and one that needs to be addressed. Two other questions that need answers are: can DOE (or a federal agency) contribute funds from its annual budget to a trust fund established by a state agency, and can DOE (or another federal agency) actually establish a state trust fund?

Although the Oak Ridge trust fund is an innovative response to the problem of paying for long-term stewardship, it has a number of weaknesses. Because of the conflicting interpretations held by the state and DOE, both financial security and enforceability are in doubt during the 14 years when the money to finance the fund is to be contributed. The rules, roles, and responsibilities of the various parties are not fully clear in the consent order, either, and there is great potential for future disagreement. Whether information is made public will depend on the policies adopted by the state and DOE. If the fund's coffers are filled after 14 years, the fund should have a good chance of enduring (though whether the amount will be sufficient remains to be seen). One way of addressing the financial security issue would have been for DOE to fully fund the trust fund up front—that is, to obligate all of the $14 million in one fiscal year.

State trusts appear to have promise as a mechanism for funding long-term stewardship at both private and federal sites, although of course much more legal research at the state level needs to be done. For federal facilities, setting up state trust funds, as was done at Oak Ridge (albeit with better up-front funding and a more comprehensive trust agreement), makes sense, given the states' role and interest in assuring long-term stewardship at federal facilities.

For federal facilities—thinking about setting up long-term stewardship trust funds at the state level might well provide a more tailored and effective approach than setting up a federal trust fund. The states have every incentive to hold the federal government accountable to perform needed stewardship duties, and, with just over 100 DOE sites across the country, state trusts are likely to be able to provide a more tailored approach than a federal trust fund. Many federal facilities, while very contaminated, in fact have some economic value, either because of their location (this is the case for a number of Department of Defense sites) or because of existing infrastructure (this is the case at some Department of Energy and DOD sites). Thus, there may be some cases even at federal sites where economic development is possible and a local business improvement district might be used to generate annual tax revenues.

State trusts could hold promise for privately owned contaminated sites as well. This depends on a crucial policy choice, however. Does it make more sense to establish long-term stewardship trust funds on a site-specific basis for private sites, so that local citizens and governments can be sure the money is there to pay for long-term stewardship activities? Or is it preferable to pool long-term stewardship trust funds—for example, at the state level—so that the money functions more like an insurance fund, meaning that less money in toto is needed? The whole question of scale—whether

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[14] 31 USC §1341 as amended. Tennessee has a number of reasons for cautious optimism that in practice it will receive the money; letter from Steven Stout, Assistant General Counsel, Tennessee Department of Environment and Conservation, September 28, 2000.

trust funds should be set up for individual sites, at the state level, or nationwide—is a critical issue that needs to be addressed in thinking about what is the most desirable and effective means of assuring long-term stewardship financing and oversight. Even if a uniform national policy is adopted, it may be that the question of scale should be answered differently in different states and regions of the country, and for different types of sites.

We turn now to conclusions and suggestions for the next steps that are needed to move this issue and, we hope, solutions to this problem forward.

Chapter 5. Conclusions and Next Steps

A number of lessons can be drawn about each of the three types of trust funds—federal, state, and private—that we have examined for their potential to assure financing and oversight of long-term stewardship at contaminated sites. We summarize these lessons in Table 1, as well as in the paragraphs that follow.

We should explain several points about the assumptions made in Table 1. First and most importantly, we have attempted to characterize how the different trusts have generally performed in practice, since in theory each could rate highly in almost any category, depending on how the specific trust was structured. Second, we follow the distinction between state trusts and private and charitable trusts as discussed throughout this report, even though both types are subject to state law. Third, we use the term private-charitable trust in this chapter to refer to the range of possible models for both private and charitable trusts. (In legal terms, as discussed in earlier chapters, a charitable trust is a particular kind of private trust, though in some essential respects a charitable trust is more public than private.) Last, we have assumed that state trusts are created by legislation, the more common case, rather than by amending the state constitution.

Federal trusts versus federal funds

Experience indicates that creating a federal trust fund would not assure the financial security of long-term stewardship. For this reason alone, we do not recommend pursuing this model any further. Nevertheless, the logic of having federal dollars pay for long-term stewardship of federal sites is compelling to state and local governments, as well as to local citizens; that is what has made federal trust funds sound so appealing. As noted earlier in this report, however, *who* pays does not depend on or determine what kind of trust fund is created, at least in theory. Federal dollars could be used to finance a state trust fund, as in the case of Oak Ridge Reservation in Tennessee. Similarly, federal dollars could fund a private-charitable trust established to finance and oversee long-term stewardship at a federal facility. However, changes in federal law may be needed to clarify or confirm that federal agencies, such as DOE or DOD, can, in fact, use federal funds to finance a trust fund to pay for long-term stewardship activities.

Table 1. Evaluation of three kinds of trusts for long-term stewardship of contaminated sites

	Criteria				
Trust funds	*Financial security*	*Clarity*	*Public information*	*Enforceability*	*Permanence*
Federal	Low	Medium to high	High	Low	Low
State	Medium	High	High	Medium to high	Medium
Private-charitable	High	High	Medium to high	High	High

Under any circumstances, it is difficult for the federal government to make reliable long-term funding commitments. This is one of the reasons why financing and creating a trust fund up front is such an attractive mechanism for long-term stewardship—it would eliminate uncertainty about whether future funds would be forthcoming. One response to this problem would be for federal agencies (such as the Department of Energy and the Department of Defense) to fully fund a few trust funds each year. Thus, for example, rather than promising to provide $1 million a year for 14 years to the Oak Ridge fund, DOE could instead provide $14 million in one year, which would eliminate uncertainty regarding future funding. Whether this would be sanctioned by Congress is, of course, another question. It might make more sense both politically and practically for agencies like DOE and DOD to have a budget for fully funding a few long-term stewardship trusts each year. An option that has been suggested is that DOE (and this could apply to other federal agencies or to privately financed sites) set aside a certain percent of program costs each year and put it in a stewardship trust fund. For DOE, with a budget of approximately $6 billion annually, this would amount to a tidy sum.

Another appeal of federal trust funds, of course, is to raise the visibility of issues related to long-term stewardship: the long time horizon involved, the need for vigilance and monitoring, the imperative of enforcement of institutional controls, the desirability of public involvement and access to information, and so forth. These are worthy goals, but creating a federal trust fund to accomplish them seems an uphill struggle with little real gain.

The promise of private-charitable trusts

Perhaps the major lesson about private-charitable trusts for long-term stewardship is the usefulness of their basic legal structure: they provide a well-established way to allocate economic assets while, at the same time, establishing enforceable rules for how, and by whom, those assets must be managed. In other words, trusts combine financial management with procedures for oversight and accountability. This lies at the heart of long-term stewardship of contaminated sites. An issue that deserves more in-depth analysis is whether a private or charitable trust might be an effective mechanism for assuring implementation of institutional controls—that is, legal restrictions on the uses of land and water.

A related lesson is the vital importance of a trust agreement or analogous legal document. The trust agreement is the written document that spells out the rules for use and management of property and clarifies the relations among different actors and organizations. When these actors include a range of local, state, and federal government agencies, such clarification is certain to be a major challenge. It is worth noting that private trust arrangements have been used successfully to address complex inter-governmental issues.[1] For contaminated sites addressed under the two major federal statutes, CERCLA and RCRA, there will also be other legal documents governing at least some aspects of long-term stewardship, including court-ordered consent decrees, regulatory requirements, and institutional and land use controls. This redundancy is likely to be necessary to long-term success.

[1] One example is the Industri-Plex site discussed in Chapter 4. Another example is the Great Lakes Fishery Trust, created in 1996 as part of a court settlement for fish losses at a hydroelectric facility on the shore of Lake Michigan; see www.glft.org.

Clearly, private and charitable trusts are viable mechanisms for addressing stewardship at privately owned contaminated sites. They are an option for federal facilities as well, but because it may be more difficult to muster the political will to get federal funding of a private-charitable trust, it is unlikely (although not impossible) that private trusts will be the "trust of choice" for contaminated federal facilities. However, to the extent that some DOE or DOD sites (or portions of sites) are attractive for economic development, it might make sense for some kind of a development or business tax to finance long-term stewardship activities, and in that case a private-charitable trust might be a good institutional mechanism for doing so. Such a trust could also provide a structure to ensure enforcement, oversight, and public information about stewardship activities. Because private and private-charitable trusts are creatures of state law, those interested in creating these types of trusts will need to examine the specific provisions of the relevant state law before moving forward. It may well be that amendments to state law could be required in order to set up effective trust funds for long-term stewardship.

State trusts—an interesting hybrid

State trusts can offer many of the benefits of both federal and private-charitable trusts and thus are an interesting hybrid. Especially for federal sites, the notion of a state trust to finance and oversee long-term stewardship is appealing. Government at all levels has a strong role to play in making sure that contaminated sites are appropriately managed, and it may be easier for federal agencies to get approval to fund a state trust than to fund a private trust. State trusts make sense for federal sites because at many of these sites it is state agencies that help oversee federal actions, along with the Environmental Protection Agency, and they have an incentive to hold federal agencies accountable for performing the necessary stewardship activities.

It is not clear whether state trusts are as attractive an option for private sites. On the one hand, the states themselves are responsible for long-term operations and maintenance activities—a subset of long-term stewardship—at many Superfund sites (specifically, those where cleanup actions were paid for out of the Superfund Trust Fund). Creating a state trust fund to *finance* that long-term stewardship may therefore be appropriate. Whether the states have the money to put into the trust fund, however, is another question. On the other hand, when it comes to *accountability*, a state trust is only as good as the trust agreement. Thus, where states are themselves responsible for implementing certain stewardship activities, as is the case for sites on EPA's National Priorities List (NPL) where EPA cleaned up the site with funds from the Superfund Trust Fund, accountability might be better served under a private-charitable trust arrangement. For NPL (or other) sites were private companies or local government are the responsible parties, either a state or a private-charitable trust could make sense.

In sum, it is clear that both state and private-charitable trust funds are very promising mechanisms for assuring financing and oversight of long-term stewardship—at either private or federal contaminated sites. A key issue, which is not addressed in this report, is where the money is going to come from. Clearly, for federal sites the next step is to ascertain whether federal agencies have the authority to contribute funds to a stewardship trust fund or to themselves establish a state or private-charitable trust. For other sites, EPA must take up the challenge of whether to require responsible parties to fund stewardship trust funds.

Next Steps

The goal of this report is to stimulate increased discussion about long-term stewardship at contaminated sites and, in particular, about whether trust funds might be a useful mechanism for ensuring needed financing and oversight of stewardship activities. It is important to note, however, that in this report we likely raise as many questions as we answer—and that more work needs to be done to move this issue forward. Stewardship activities are crucial to assuring long-term protection of public health and environment at many sites—both federal and private—across the United States, as well as to assuring the credibility of federal and state environmental programs.

We recommend several studies and research projects, as well as actions, to move the issue of effective long-term stewardship forward.

1. Building on the efforts of DOE's Office of Long-Term Stewardship, EPA should develop, through regulation under CERCLA and RCRA, a coherent and transparent long-term stewardship program that spells out the required stewardship activities at all sites addressed under these two laws, as well as who—federal agencies, state agencies, local governments, or responsible parties—will be responsible for which stewardship activities.
2. DOE and DOD should ascertain whether they do or do not have legal authority to finance or establish state or private-charitable trust funds—in this case, for financing and oversight of long-term stewardship. If they do not, they should seek such authority.
3. EPA, DOE, and DOD should fund an independent study to analyze the relevant trust law in states with many federal facilities and Superfund sites and assess the provisions of state trust law that would affect the creation of state trusts or private-charitable trusts for long-term stewardship.
4. EPA, DOE, DOD, and representatives from state and local governments should draft a model trust agreement for creating a long-term stewardship trust fund, and they should consider whether it makes more sense to establish a single trust fund for each site (state or private) or to create state or regional trusts for all sites within a state or region.
5. EPA should fund a study to systematically document examples of state or private-charitable trust funds used for cleanup and stewardship purposes at Superfund sites. As part of this effort, EPA should examine the feasibility of requiring responsible parties at Superfund sites to put aside a specified percentage of cleanup costs into a fund for stewardship, either on a site-by-site basis, or on a pooled basis.
6. EPA and other federal agencies should assess how many Superfund sites (both federal and private) rely on institutional controls for assuring long-term protection and to what extent, and also explore whether a state or private-charitable trust fund might serve as an effective mechanism for monitoring and enforcing institutional controls.
7. EPA and other federal agencies should develop estimates of the annual costs of long-term stewardship for private sites and for federal sites, including the costs of monitoring and enforcing institutional controls.

8. Once legal authority to finance stewardship trust funds has been established, DOE and DOD should create a pilot program to finance long-term stewardship trust funds for federal facilities. This could involve setting aside a portion of each agency's annual appropriations to help create stewardship trust funds, or some other funding mechanism. Proposals for trust funds should be evaluated based on whether they meet specific criteria, such as those articulated in this report. Another mechanism for funding stewardship at federal sites would be to set aside a portion of DOD or DOE's environmental management program to be put in a trust fund for future stewardship activities.