

Innovative Financial Mechanisms to Fund Watershed Restoration

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IN CONJUNCTION WITH THE NATIONAL FOREST RESTORATION COLLABORATIVE



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Project Partners

The National Forest Restoration Collaborative is comprised of environmental and community-based forestry groups dedicated to providing national leadership to advance comprehensive forest and watershed restoration that is ecologically sound and benefits rural communities.

Wildlands CPR revives and protects wild places by promoting watershed restoration to improve fish and wildlife habitat, provide clean water and enhance community economies. We focus on reclaiming ecologically damaging, unneeded roads and on stopping off-road vehicle abuse.

American Lands Alliance's mission is to protect and restore America's forest ecosystems by providing national leadership, coordination and capacity building for the forest conservation movement.

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Abstract

Not enough funding programs exist to pay for an optimal level of watershed restoration. Because raising funds through traditional general appropriations processes is a well-documented process, this report explores various innovative funding mechanisms. These mechanisms differ according to whether liable parties exist that have caused or continue to cause the environmental damage that requires restoration. For those situations in which there are liable parties, many funding mechanisms exist:

- Cap-and-trade schemes;
- Mitigation banking;
- Taxes on damaging activities; and
- Increased bonding requirements.

For situations where no liable party exists, a variety funding mechanisms are available:

- Municipal bonds;
- Tax increment financing;
- Revenue bonds;
- Special governmental districts;
- Resort taxes;
- Access fees;
- Permit fees; and
- Surcharges on retail goods.

Another significant avenue of potential funding for watershed restoration is national climate change legislation. While the science and economics behind whether carbon offsets can fund watershed restoration is uncertain, great potential does exist to fund restoration through adaptation and mitigation monies.

The watershed restoration sector of the economy needs more avenues of funding.¹ Even though various levels of government already fund—directly or indirectly—the majority of restoration work,² these financial and regulatory mechanisms do not achieve the level of restoration that the country needs for a more sustainable natural environment.

This report explores innovative funding mechanisms that may achieve a higher level of restoration. It only covers non-appropriations based mechanisms, as appropriations funding is a well-documented traditional

Economically efficient mechanisms are those in which those who caused the damage or receive restoration's benefits pay

policy solution.³ Furthermore, economically speaking, general appropriations are often not an equitable and efficient means of funding watershed restoration, because those who caused the damage or receive restoration's benefits are not the ones who pay for it.⁴ In the author's opinion, general appropriations are not sustainable as the sole means of funding restoration, especially with increasingly large federal and state budget deficits and national debt.⁵ Because of this, innovative funding sources—some already tested in certain localities and states, others completely new—hold great potential for catalyzing growth within the restoration sector of the economy.

This report first outlines the challenges to adopting innovative ways of funding watershed restoration. Second, it proposes a taxonomy of the various economic conditions under which restoration occurs, for the purpose of grouping relevant policy options together. Examples of

potential funding mechanisms are then examined within this breakdown. Finally, the report discusses the potential that climate change legislation has to fund watershed restoration.

Difficulties in Funding Restoration

Funding watershed restoration through nontraditional means faces many difficulties. Despite the notoriety of market-based mechanisms, such as cap-and-trade, their applicability to ecological restoration remains limited. In order to function these mechanisms require quantifiable indicators. Restoration activities in turn must directly affect this indicator. Past market-based environmental solutions have measured sulfur dioxide emissions or acres of wetlands.⁶ However, many areas of ecological restoration do not contain such quantifiable measures. For ex-

Market-based mechanisms need quantifiable indicators, a steady supply of and demand for the good, and multiple parties in order to work

ample, road decommissioning in the Pacific Northwest often occurs in order to prevent catastrophic road wash-outs. Such rare yet significant events are extremely difficult to integrate into market mechanisms. Markets also present the problem of requiring both a steady supply of and demand for the environmental good being traded.⁷ For many types of ecological restoration, too few parties exist. A third problem is that much of the restoration occurs on public lands. Few avenues are available to implement market-based mechanisms of federal, state, and local lands. The system could be either a monopoly or monopsony. While these problems do limit many types of restoration from benefiting from market mechanisms, other areas of ecological restoration are still applicable, a few of which this report will examine.

Another problem facing innovative funding mechanisms is that many of them do not help strengthen the restoration sector of the economy, even if they do improve ecological health. For example, many governmental programs provide incentives to private landowners to restore parts of their land, such as in the Conservation Reserve Program. These monies often go to landowners who un-

¹ King, D.M. 1991. Costing out Restoration. Restoration and Management Notes 9:15-21.

² Lavendel, B. 2002. The Business of Ecological Restoration. Ecological Restoration 20 (3):173-178.

³ This report does cover watershed restoration funding from the auction of carbon dioxide emission permits. While the way in which these revenues would be diverted toward restoration programs is akin to general appropriations, the funding mechanism itself—auctioning off pollution permits—is innovative and nontraditional.

⁴ Congressional Budget Office. 2008. Issues and Options in Infrastructure Investment. Washington, DC: Congressional Budget Office.

⁵ Hurd, Josh. 2009. Characteristics of Watershed Restoration Funding. Missoula: Wildlands CPR.

⁶ Puget Sound Partnership. 2009. New Innovative Funding Sources. Seattle.

⁷ Ibid.

dertake the restoration work themselves, with relatively little money moving into hands of restoration firms and practitioners. Thus, if the goal of new funding mechanisms is to grow the restoration sector of the economy, some otherwise beneficial programs would not qualify.

Some innovative funding mechanisms are only applicable at state and local levels. This is because many of the mechanisms are legally restricted to state and local

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governments, or would be overly difficult to implement at the federal level. For example, sewer fees utilized by the State of Maryland to fund restoration activities within the Chesapeake Bay would be logistically and legally difficult to legislate at the federal level. Property and sales taxes remain in the exclusive domain of states and localities. Also, special governmental districts that have revenue-generating authority are creations of state legislatures, not the U.S. Congress.

Innovative funding mechanisms are rarely universally applicable. A variety of different ecological problems create the need for restoration. These different problems in turn warrant distinct policy solutions. Furthermore, these different ecological problems occur in diverse areas with divergent legislative and legal structures. Thus what works in one state may not work in another. Also, different geopolitical areas can have contrasting political climates. Two equally efficient and effective policy options may face separate fates in two states, because of the states' divergent political situations.

These realities mean that there is no silver bullet for restoration funding. The ecological restoration sector of the economy will always depend on a plethora of disparate funding mechanisms and regulations that each address a specific issue. In concert, they can create a thriving restoration economy, but little potential exists for a watershed restoration funding panacea.

Conditions of Restoration and Possible Funding Mechanisms

The capabilities of a given funding mechanism to support restoration activities largely depend on the charac-

The capabilities of a given funding mechanism to support restoration activities largely depend on the characteristics of the degraded land and restoration activities in question

teristics of the degraded land and activities in question. Mechanisms are not universally applicable. However, by understanding the various conditions under which certain types of funding are appropriate, mechanisms can be matched to specific situations. This report proposes such a taxonomy. It first categorizes restoration situations according to whether a clearly liable party exists for the environmental damage. For those situations in which no liable party exists, funding mechanisms are assigned depending on whether parties exist that benefit from restoration activities, or whether the industry of the original liable firm still exists. For those situations in which at least one liable party exists, funding mechanisms are classified according to the characteristics of the parties that damaged or continue to damage natural areas.

No Liable Parties

Oftentimes the environmental damage that requires restoration happened sufficiently long ago that finding a clearly identifiable party is not possible.⁸ For these situations in which no liable party exists, either those who would benefit from an improved ecosystem or those in the industry of the firm that originally caused the damage efficiently carry the cost of paying for restoration. When those who benefit pay for restoration, sub classifications exist based on whether the parties are confined to a specific geographical area or a certain type of activity.

Benefits Confined to Geographic Area

When those who benefit from restoration activities are confined to a specific geographical area, a variety of funding mechanisms exist:

⁸ Holl, Karen D., and Richard B. Howarth. 2000. Paying for Restoration. *Restoration Ecology* 8 (3):260-267.

- *Municipal Bonds* — When the geographic area corresponds to a city or county, that entity can issue municipal bonds, usually in the form of general obligation bonds, to fund restoration activities.⁹
- *Tax Increment Financing* — If the restoration activities are expected to increase property values, then tax increment financing is an option.¹⁰ Tax increment financing works by capping property tax proceeds within a certain area and diverting any increase in property tax revenues to restoration activities.
- *Revenue Bonds* — If the restoration brings about increases in various types of town revenues, then these revenues could go to pay interest and principal on bonds whose proceeds fund watershed restoration activities.¹¹
- *Special Governmental Districts* — If the geographic area corresponds to natural boundaries, such as a watershed, but not to political boundaries, then

Special governmental districts can raise money through sales taxes, property taxes, fees and charges, and bonds

voters can create special governmental districts to govern restoration activities and raise funds.¹² These often require state enabling legislation in order to work. Once passed, the districts can raise money through sales taxes, property taxes, fees and charges, and bonds. An example of this is Colorado's Forest Improvement Districts (Appendix B).¹³

- *Resort Taxes* — When tourism is common within the geographic area, and this tourism likely would increase if the condition of natural areas were improved, then resort taxes, such as for rental cars and hotel rooms, could efficiently raise funds.¹⁴

Benefits Confined to Specific Activities

If restoration activities tend to benefit people who engage in a certain type of activity, then other specific funding mechanisms are more efficient:

- *Access Fees* — Governmental authorities could implement access fees for those people engaging in the activity that would benefit from restoration.¹⁵ For example, if a designated ATV area was in need of restoration, then governmental authorities could limit access to that ATV area to those paying an access fee. This fee would then go to pay for restoration of the area.
- *Permit Fees* — If the activity in question already requires special permitting, such as for hunting and fishing, then additional permit fees could be levied.¹⁶ These types of fees are common, such as for Montana's Future Fisheries Program.¹⁷
- *Surcharges on Retail Goods* — When the activity in question requires retail purchases, governmental authorities could pass surcharges on retail goods that would go to pay for ecological restoration. For example, a city could implement a sales tax on off-road vehicles and dirt bikes, with the funds generated going to improve ecosystems damaged by their use.

Liable Industry in Existence

Often the industries of the now defunct firms that caused the environmental damage are still in existence. These industries likely benefitted from the activities and revenues of the defunct firms, thus having the industries help pay for restoration is economically efficient and prudent. Two primary policy options exist in this realm:

- *Tax on Industry Activities* — State or federal governments could implement a tax on industry activities, such as a severance tax, with these monies going to restore past damage caused by the industry. An example of this type of policy is the Superfund program (Comprehensive Environmental

⁹ Smith, Kevin B., Alan Greenblatt, and Michele Mariani. 2007. *Governing States and Localities*. Washington, DC: CQ Press.

¹⁰ Ibid.

¹¹ Ibid.

¹² Ibid.

¹³ Colorado General Assembly. 2007. House Bill 07-1168: An Act Concerning Forest Improvement Districts. Denver, CO: Office of Legislative Legal Services.

¹⁴ Montana Department of Revenue. 2009. Resort Tax 2008 [cited May 21 2009]. Available from <http://mt.gov/revenue/forindividuals/misc/resort.asp>.

¹⁵ Smith, Kevin B., Alan Greenblatt, and Michele Mariani. 2007. *Governing States and Localities*. Washington, DC: CQ Press.

¹⁶ Ibid.

¹⁷ Habitat Protection Bureau. 2009. Future Fisheries Improvement Program: Report to the 2009 Legislature and Fish, Wildlife and Parks Commission. Helena, MT: Montana Fish, Wildlife and Parks.

Response, Compensation, and Liability Act).¹⁸

- *Incentive Programs* — Authorities could create incentive-based programs in which the government encourages firms within the industry to cleanup past damage. The government can also achieve this through regulations, although a regulatory approach would likely see more political opposition.

Nobody Benefits and No Liable Industry

Some cases do exist in which restoration of natural areas is important for biodiversity and other non-anthropocentric reasons, but where no party clearly benefits from this increased ecological integrity. These cases are rare, as usually someone benefits. Limited policy options exist in these scenarios, as voters may be unlikely to approve funds for which they derive no benefit. Politicians may not likely support policy options either. However, in some cases the intrinsic value that people associate with such restoration could motivate public support.¹⁹

Discussion

As shown, many policy options exist to fund watershed restoration when no clearly liable party exists. Economic and political analysis of each specific restoration situation is necessary to determine which mechanism is most appropriate. Furthermore, the mechanisms may not raise enough money to properly restore damaged ecosystems by themselves. In these situations, general appropriations, other policy options, or private support is likely necessary.

Clearly Liable Parties

Many situations exist in which there are liable parties who caused the need for watershed restoration. The damage that they cause does not have to be intentional, and can either have occurred in the past or continue to happen in the present. A variety of innovative mechanisms exist to fund watershed restoration in these situations. The mechanisms are grouped based on the characteristic of how many parties share responsibility and whether the parties are private.

¹⁸ Environmental Protection Agency. 2009. Cleaning up the Nation's Hazardous Wastes Sites 2008 [cited May 20 2009]. Available from <http://www.epa.gov/superfund/>.

¹⁹ Callicott, J. Baird. 2002. The Pragmatic Power and Promise of Theoretical Environmental Ethics. *Environmental Values* 11:3-25, Spash, Clive L. 1997. Ethics and Environmental Attitudes with Implications for Economic Valuation *Journal of Environmental Management* 50 (4):403-416.

Many Private Parties

If many small parties, mostly private, are responsible for past environmental damage or continue to cause damage that necessitates restoration, a variety of policy options exist:

- *Payment for Ecosystem Services* — One of the most common types of programs is payment for ecosystem services, in which the government pays landowners for measurable improvements in certain aspects of environmental quality.²⁰ An example of this would be the Department of Agriculture's Conservation Reserve Program.²¹ Important to note is that payment for ecosystem services is an innovative way to distribute funds, but not a financing mechanism in itself.
- *Cap-and-Trade Systems* — If the activities of the many parties results in quantifiable damage, this damage is clearly linked to individual parties, and the damage itself does not differ in quality among the various parties, then a cap-and-trade system could facilitate restoration.²² In these situations,

For a cap-and-trade system, the right to cause damage is privatized, a limit is placed on the total amount of damage possible, and then parties themselves buy or sell the right to cause this damage

the right to cause damage would be privatized, a limit to the total amount of damage would be implemented, and the parties themselves would buy or sell the right to cause this damage. Program administrators would slowly decrease the limit of total damage over time. While most well known for climate change mitigation (which this report will cover in a later section), cap-and-trade programs have documented successes in other realms at the regional and state level. For example, Lake Tahoe implemented a successful cap-and-trade program

²⁰ Puget Sound Partnership. 2009. *New Innovative Funding Sources*. Seattle.

²¹ Natural Resource Conservation Service. 2009. *Conservation Reserve Program*. United States Department of Agriculture 2009 [cited May 20 2009]. Available from <http://www.nrcs.usda.gov/programs/crp/>.

²² Puget Sound Partnership. 2009. *New Innovative Funding Sources*. Seattle.

for impervious surfaces (usually roads) in order to prevent runoff from impacting water quality (Appendix A).²³ Similar programs could be implemented for forest roads, stream banks, or shorelines. Some types of cap-and-trade systems do not raise much money, however.

- *Mitigation Banking* — Mitigation banking is another means of achieving restoration goals when many private actors are involved. It involves the government requiring private firms to obtain credits in order to undertake damaging activities. They would obtain these credits from mitigation banks that proactively restore natural areas. The most fa-

Mitigation banking involves the government requiring private firms to obtain credits in order to undertake damaging activities

mous implementation is the Environmental Protection Agency's compensatory mitigation program, in which the federal government allows developers to build over wetlands only if they obtain credits for wetlands created or restored elsewhere—permits that they often buy from wetland mitigation banks that restore areas specifically for this purpose.²⁴ Various levels of government could implement this for a variety of other ecosystem services, or even for restoration activities such as road decommissioning. For example, if a landowner wanted to build a mile of forest road, then she would have to buy credits for two miles of forest roads decommissioned in the same watershed.

- *Taxes on Damaging Activities* — A more traditional, yet still efficient and functional, means of funding restoration activities when a variety of private actors are involved is through taxes on damaging activities.²⁵ Governments would levy these on those who cause environmental damage, either directly or through taxing the activity, such as with a resource severance tax. The revenues would both increase

the cost of doing this damage, thus decreasing the amount that happens, and also raise funds to mitigate the damage. Examples of this are development fees and land-use change taxes. Maryland has implemented a successful program, increasing sewer connection fees in order to raise millions of dollars to upgrade sewage treatment facilities, thus helping to restore a properly functioning Chesapeake Bay ecosystem.²⁶

Few Private Parties

If only a few parties are responsible for past or ongoing ecological damage, some of the above mechanisms, such as cap-and-trade, are not viable. However, other options are still possible:

- *Tax on Damaging Activities* — Governments could implement a tax on damaging activities, similar to the tax described in the previous section. Revenues from this tax would go to mitigate the effects of the damage, and also decrease the amount of damage that happens by increasing its cost. Severance taxes on resource extraction fit in this category, such as Montana's Coal Severance Tax.²⁷
- *Restoration Bonding* — Authorities could require restoration assurance bonding, coupled with mandatory cleanup.²⁸ Firms undertaking damaging activities would be required to restore the land, and would post bonds to ensure that this happens. If the firm goes bankrupt or fails to properly restore the land, the firm would forfeit the bond, and its revenues would fund proper restoration.
- *Mitigation Banking* — Covered in the previous section, mitigation banking is also an option when only a few parties are responsible for ongoing ecological damage.

²³ Ibid.

²⁴ Environmental Protection Agency. 2008. Wetlands Compensatory Mitigation Factsheet. Washington, DC.

²⁵ Holl, Karen D., and Richard B. Howarth. 2000. Paying for Restoration. *Restoration Ecology* 8 (3):260-267.

²⁶ Maryland Department of the Environment. 2009. Bay Restoration Fund (Senate Bill 320) 2005 [cited March 17 2009]. Available from <http://www.mde.state.md.us/Water/CBWRF/index.asp>.

²⁷ Montana Office of Budget Programming and Planning. 2004. Volume 2 - Governor's Budget - Revenue Estimates: Coal Severance Taxes. Helena, MT.

²⁸ Holl, Karen D., and Richard B. Howarth. 2000. Paying for Restoration. *Restoration Ecology* 8 (3):260-267.

Governments are the Party

At times it is the government itself that is responsible for damage.²⁹ Restoration in these situations, such as road building in National Forests, is difficult to fund through innovative financing mechanisms. The most obvious

Paying for restoration with innovative funding mechanisms is difficult when the government is the principal party is difficult

way to achieve restoration is by issuing internal regulations that require land managers to mitigate and restore damage. This could lead agencies to incorporate restoration funding into their day-to-day operations. As stated before, if specific parties benefit from the damaging activities of the government, the cost of restoration can be passed onto them. Usually, however, there are few people who benefit from the restoration and have an ability to pay. In these cases governments usually must resort to general appropriations in order to restore past damage that they have caused.

Discussion

A variety of promising funding mechanisms can fund watershed restoration when clearly liable parties that caused the damage exist. All across the country, municipalities, states, and even the federal government are implementing them.³⁰ However, they work best when many liable parties exist, and these parties are all private. Innovative market-based mechanisms are less relevant to government-caused damage, or damage caused by relatively few private parties.

Regulations

Additional government regulations can also help grow the restoration sector of the economy. Already, most restoration work is driven by governmental regulations.³¹ In areas where current environmental laws inadequately facilitate restoring damaged parts of the natural environment, and where clearly liable parties are responsible, government officials could implement new regulations

that would require more mitigation and restoration as part of normal operations. While this would not directly fund restoration, it would force developers, resource

Governments could implement new regulations that would require more restoration as part of normal business operations

extractors, and others to more adequately incorporate restoration costs into their business plans. An in-depth exploration of what these new regulations might entail is beyond the scope of this report, but some examples are:

- More stringent water quality standards, especially taking into account the long-term probability of catastrophic events such as road washouts;
- More stringent silviculture guidelines, which could be implemented at state or federal levels to require more comprehensive restoration, such as mandatory road obliteration after logging operations are completed. Reformed bonding requirements could be paired with this as well;
- More stringent road building standards, both in urban and rural areas, which would better take into account watershed damage, fish passage, and stream sedimentation.

These suggested potential regulatory reforms could help strengthen the restoration sector of the economy. Many more types of regulations do exist, both at state and federal levels.

Climate Change as a Driver of Ecological Restoration

Legislation meant to stabilize and eventually decrease the greenhouse gas emissions of the United States has the potential to strengthen the restoration sector of the economy. This climate change legislation is likely to pass the U.S. Congress in the next few years, probably in the form of a cap-and-trade system for greenhouse gases.³² This cap-and-trade system would limit how much total carbon dioxide firms could emit by giving the firms per-

²⁹ Tinker, D. B., C. A. C. Resor, G. P. Beauvais, K. F. Kipfmüller, C. I. Fernandes, and W. L. Baker. 1998. Watershed Analysis of Forest Fragmentation by Clearcuts and Roads in a Wyoming Forest. *Landscape Ecology* 13:149-165.

³⁰ Puget Sound Partnership. 2009. *New Innovative Funding Sources*. Seattle.

³¹ Lavendel, B. 2002. The Business of Ecological Restoration. *Ecological Restoration* 20 (3):173-178.

³² Broder, John M. 2009. Climate Bill Clears Hurdle, but Others Remain The New York Times, May 22, 2009.

mits that would allow them to pollute. The federal government would disperse a limited number of permits, but the firms that receive these permits could buy more from or sell excess to other firms. Those firms for whom

Climate change mitigation legislation within the United States has the potential to strengthen the restoration sector of the economy

upgrading to more efficient technology is cheaper than buying additional permits from other firms would do so, whereas those firms for whom technological upgrades are overly expensive could buy additional permits to pollute. In doing so, a market price for carbon dioxide and other greenhouse gases would be set, much like prices on existing commodities markets.³³

This cap-and-trade legislation would likely contain allowances for offsets through carbon sequestration.³⁴ For example, trees take in, or sequester, large amounts of carbon dioxide throughout the course of their lives, thus removing the carbon from the atmosphere.³⁵ If a functioning carbon market were in existence, then firms that normally buy and sell emissions permits could obtain similar credits if they invested in carbon sequestration initiatives. Instead of obtaining ten permits, worth one ton of carbon each, to expand a factory, a firm could invest in ten tons worth of carbon sequestration. Theoretically, the price of obtaining one ton worth of emission permits would be the same as investing in one ton worth of carbon sequestration.

If ecological restoration initiatives are proven to sequester significant amounts of carbon, then carbon markets could finance them. However, for many areas of watershed restoration it is likely that not enough carbon can be sequestered. For example, decommissioning forest roads often costs about \$10,000 per mile.³⁶ The price

of carbon is expected to reach \$40 in 2020.³⁷ Thus, assuming lifetime sequestration could be frontloaded with no discount rate at a present hypothetical \$40 per ton of carbon, a mile of decommissioned road would have to sequester a lifetime total of 250 tons of carbon in order to finance decommissioning through carbon offsets.

If ecological restoration initiatives are proven to sequester significant amounts of carbon, then carbon markets could help finance the activities

However, a ponderosa pine forest in the Northern Rockies sequesters only about one metric ton of carbon dioxide per acre per year, including live trees and soil organic carbon.³⁸ At \$40 per ton, this would only come to about \$120 per year from carbon markets to pay for a mile of road decommissioning, which does not even come close to the amount needed.³⁹ This is not to say that all realms of ecological restoration are not viable, however.

The other realm in which climate change legislation can fund restoration projects is through mitigation and adaptation funding. Global warming will have unknown

Climate change legislation can also fund restoration projects is through mitigation and adaptation measures

impacts on ecosystems.⁴⁰ Therefore, the more intact a watershed, the better chance it has to adapt.⁴¹ Many damaged ecosystems cannot adapt quickly enough, thus the need for restoration. However, mitigation and adap-

³³ Point Carbon. 2009. Carbon 2009: Emission Trading Coming Home. edited by E. Gvinnereim, K. Roine and C. Heimdal. Oslo, Norway.

³⁸ Chicago Climate Exchange. 2004. Ccx Exchange Offsets and Exchange Early Action Credits. In Ccx Confidential. Chicago.

³⁹ A forest road is typically 22 feet wide. 22ft x 5280ft = 116,160 square feet. At 43,560 square feet per acre, one mile of forest road would be equivalent to 2.67 acres. Rounding up to 3 acres, at \$40 per ton this would be \$120.

⁴⁰ Houghton, John. 2005. Global Warming. Reports on Progress in Physics 68:1343-1403, Norby, Richard J., and Yiqi Luo. 2004. Evaluating Ecosystem Responses to Rising Atmospheric Co2 and Global Warming in a Multi-Factor World. New Phytologist 162:281-293.

⁴¹ Cramer, Wolfgang, Alberte Bondeau, F. Ian Woodward, I. Colin Prentice, Richard A. Betts, Victor Brovkin, Peter M. Cox, Veronica Fisher, Jonathan A. Foley, Andrew D. Friend, Chris Kucharik, Mark R. Lomas, Navin Ramankutty, Stephen Sitch, Benjamin Smith, Andrew White, and Christine Young-Molling. 2001. Global Response of Terrestrial Ecosystem Structure and Function to Co2 and Climate Change: Results from Six Dynamic Global Vegetation Models. Global Change Biology 7:357-373, Kelly, P. M., and W. N. Adger. 2000. Theory and Practice in Assessing Vulnerability to Climate Change and Facilitating Adaptation. Climatic Change 47:325-352.

³³ Environmental Protection Agency. 2009. Epa Analysis of the American Clean Energy and Security Act of 2009 H.R. 2454 in the 111th Congress. Washington, DC.

³⁴ Ibid.

³⁵ Dewar, Roderick C., and Melvin G. R. Cannell. 1992. Carbon Sequestration in the Trees, Products and Soils of Forest Plantations: An Analysis Using Uk Examples. Tree Physiol 11 (1):49-71. □

³⁶ Center for Environmental Economic Development. 2003. Reinvestment in Jobs, Communities and Forests: The Benefits and Costs of a National Program for Road Removal on U.S. Forest Service Lands, a Preliminary Analysis. Missoula, MT: Wildlands CPR.

tation funding is not inherently part of a cap-and-trade system—they have no market component to them. Furthermore, a cap-and-trade system by itself does not necessarily generate funds for the government. Rather, it only generates funds if the permits that firms need to emit greenhouse gases are auctioned off to the firms, rather than being allocated for free.

It is most likely the case, however, that some percentage of the permits will be auctioned off, with that percentage increasing over time.⁴² If this happens, then the government would reap billions of dollars of revenues each year from the auctions.⁴³ Spending a portion of this money on mitigation and adaptation to enhance resiliency

While climate change legislation itself could provide a new revenue source for watershed restoration, the actual process will basically be equivalent to appropriations

would be economically efficient, as those firms partly responsible for climate change would then help pay to alleviate its effects.⁴⁴ The process of obtaining a portion of these auction revenues is likely to be similar to implementing and changing any other government legislation with significant amounts of money involved, such as the recent American Recovery and Reinvestment Act. While climate change legislation itself could provide a new revenue source for watershed restoration, the actual process will basically be equivalent to appropriations. Therefore, land managers, activists, and other citizens interested in securing cap-and-trade revenues for restoration will have pursue this money like any other appropriations effort.

Overall, climate change legislation offers mixed potential to fund watershed restoration activities. Relatively few types of major watershed restoration are likely to be funded by carbon sequestration programs, due to the high cost of restoration and low price of carbon. Securing monies raised by a possible auction of carbon dioxide permits, however, has great potential to fund restoration

work. In order for this to happen more evidence and data on watershed restoration's effects on ecosystem adaptation and resiliency is needed. Mitigation and adaptation funding requires solid science supporting restoration policies, public support behind the need for restoration, and powerful leadership pushing the issue.

Conclusion

Financing watershed restoration initiatives is difficult. No silver bullet exists. A variety of conditions and problems warrant restoration, but these different situations often necessitate different funding mechanisms. Many

Little potential exists for a watershed restoration funding panacea

promising innovative mechanisms to strengthen the restoration sector of economy do exist, such as special restoration-focused governmental districts and market-based solutions to impervious surfaces and stream banks. The single largest amount of money to fund restoration could come from auctioning off emission permits as part of federal climate change legislation, but many other interests will be vying for this money as well. Overall, the restoration sector of the economy is best strengthened through multiple diverse funding sources, each addressing a certain problem and building up the sector from a different angle.

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⁴² Congressional Budget Office. 2009. Estimated Changes in Revenues and Direct Spending under H.R. 2998, as Amended and Reported by the House Committee on Rules on June 26, 2009. Washington, DC.

⁴³ Ibid.

⁴⁴ ———. 2008. Issues and Options in Infrastructure Investment. Washington, DC: Congressional Budget Office.

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Appendix A: Lake Tahoe Watershed Land Coverage Trading

Runoff from impervious surfaces, such as driveways and parking lots, contributes to Lake Tahoe's declining water quality.¹ In order to address this problem, the Tahoe Regional Planning Authority (TRPA) has created a cap-and-trade program within its ordinances that governs the type and amount of land coverage modifications that developers, businesses, and residents can implement.² In ecologically important parts of the watershed, the ordinance caps the total area of impervious surfaces. People can still modify land coverage, however, if they acquired credits that people elsewhere in the watershed obtained through restoring impervious surfaces on their land.³ This methods allows for restoring the watershed in such away that still allows for development. Many important aspects of the program make it successful:⁴

- *Science Based* — The program is guided by sound science, with different types of land within the watershed grouped into different categories based on their ecological importance;
- *Ecologically Sensitive* — Different credit trading ratios of developed land to restored land exist depending on sensitivity of the type of land wanting to be developed (for example, the least sensitive parcels can be developed at a 1:1 ratio, but more sensitive parcels must have two square feet of impervious surface removed for every one square foot developed);
- *Site Specific* — The amount of impervious surfaces allowable on a given plot of land depends on that specific site, a program aspects necessary to have the support of private residents and developers;
- *Sub-Basin Specific* — In order to ensure that the watershed is uniformly protected from detrimental land coverage, credits can only be traded within sub-basins;
- *Permanent Protection* — Easements are placed on properties after impervious surfaces are destroyed and land restored, which ensures that the property will not be developed in the future; and
- *Adequate Supply and Demand* — Due to the highly active and expanding real estate market within the Lake Tahoe watershed, an adequate supply and demand of credits has facilitated active participation within the program.

The creation of new programs like the Lake Tahoe Land Coverage Program has great potential to facilitate high-quality restoration, expanding the watershed restoration sector of the economy and restoring ecologically sensitive watersheds. Programs of this nature are most applicable to areas that face significant development pressures on private lands owned by a variety of landowners. A program like this is not applicable to public lands because of the many actors necessary to have adequate supply and demand. Numerous areas around the country exist where development pressure has scientifically-proven impacts on watershed health and specific aspects of the development are conducive to a cap-and-trade system.

To download a copy of the Lake Tahoe Regional Planning Authority Ordinance (32 pages long) that implements the program, please go to:

<http://www.trpa.org/documents/docdwnlds/Ordinances/COCh20.pdf>

¹ Tahoe Regional Planning Agency. 2001. Finance Plan to Implement the Environmental Improvement Program for the Tahoe Basin.

² Puget Sound Partnership. 2009. New Innovative Funding Sources. Seattle.

³ Tahoe Regional Planning Agency. 2008. TRPA Code of Ordinances. Chapter 20: Land Coverage Standards.

⁴ Puget Sound Partnership. 2009. New Innovative Funding Sources. Seattle.

Appendix B: Colorado Forest Improvement District Act

Colorado, like other western states, faces problems with numerous costly fires in the wild land-urban interface.¹ In order to better fund and govern forest improvements to decrease the chances of catastrophic fires, the Colorado General Assembly created Forest Improvement District Act, which passed in 2007. Through the Act, municipal and county governments create geographically confined forest improvement districts for areas within the wild land-urban interface that potentially face large forest fires.² The districts are distinct forms of government, which means that they have a certain degree of autonomy and can raise revenues on their own. The districts use the revenues to pay for forest improvements that they deem necessary. The Colorado Forest Improvement Districts have a variety of characteristics:³

- *Voter Approved* — After the municipality or county proposes to create a forest improvement district, the electorate within the district must approve its creation through a popular vote;
- *Diverse Board of Directors* — After its creation, a district is run by a board of directors that must include representatives from certain areas, including environmental protection organizations and federal land management agencies;
- *Broad Array of Powers* — A forest improvement district can commission studies, apply for and receive grants, require monitoring of improvements, and commission projects;
- *Revenue Generating Avenues* — A forest improvement districts can levy and collect a variety of taxes and issue debt to finance forest improvement projects;
- *Public and Private Lands* — Districts can work with and provide funds for both private landowners and other public entities, such as federal land management agencies; and
- *Landowners Incentives* — Private landowners can engage in forest improvement work on their own and later be reimbursed by their forest improvement district.

All of these aspects make the Colorado Forest Improvement District system an example to other states that want to implement special governmental districts to facilitate watershed restoration activities. Special governmental districts could be useful to watershed restoration because they may be created specifically for the purpose of restoring watersheds. They are distinct governmental entities. Furthermore, special governmental districts can utilize a variety of revenue generating mechanisms, in some cases mechanisms that municipalities cannot use. They have great potential to fund high-quality watershed restoration projects into the future.

Important to note, the purpose of the Colorado Forest Improvement District Act is controversial and not necessarily consistent with the Society for Ecological Restoration's definition of ecological restoration. However, the concepts employed are applicable to all types of watershed restoration, thus the inclusion of this appendix on the Act.

The House Bill of the Colorado Forest Improvement District Act itself appears on the following pages.

¹ Veblen, Thomas T., Thomas Kitzberger, and Joseph Donnegan. 2000. Climatic and Human Influences on Fire Regimes in Ponderosa Pine Forests in the Colorado Front Range. *Ecological Applications* 10 (4): 1178-1195.

² Colorado General Assembly. 2007. House Bill 07-1168: An Act Concerning Forest Improvement Districts. Denver, CO: Office of Legislative Legal Services.

³ Ibid.

Session Laws of Colorado 2007 First Regular Session, 66th General Assembly

CHAPTER 111

GOVERNMENT - SPECIAL DISTRICTS

HOUSE BILL 07-1168

BY REPRESENTATIVE(S) White, Buescher, Curry, Jahn, Kerr J., Levy, Liston, Madden, Merrifield, Romanoff, Rose, Frangas, King, Labuda, Roberts, and Todd; also SENATOR(S) Fitz-Gerald, Bacon, Boyd, Gordon, Groff, Hagedorn, Harvey, Isgar, Keller, Kester, Morse, Penry, Romer, Schwartz, Shaffer, Tapia, Taylor, Tochtrop, Tupa, Veiga, Ward, Wiens, Williams, and Windels.

AN ACT

CONCERNING FOREST IMPROVEMENT DISTRICTS.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. 32-1-103, Colorado Revised Statutes, is amended BY THE ADDITION OF A NEW SUBSECTION to read:

32-1-103. Definitions. As used in this article, unless the context otherwise requires:

(7.5) "FOREST IMPROVEMENT DISTRICT" MEANS A SPECIAL DISTRICT CREATED PURSUANT TO ARTICLE 18 OF THIS TITLE THAT PROTECTS COMMUNITIES FROM WILDFIRES AND IMPROVES THE CONDITION OF FORESTS IN THE DISTRICT.

SECTION 2. Title 32, Colorado Revised Statutes, is amended BY THE ADDITION OF A NEW ARTICLE to read:

ARTICLE 18
Forest Improvement Districts

32-18-101. Short title. THIS ARTICLE SHALL BE KNOWN AND MAY BE CITED AS THE "FOREST IMPROVEMENT DISTRICT ACT".

32-18-102. Definitions. AS USED IN THIS ARTICLE, UNLESS THE CONTEXT OTHERWISE REQUIRES:

- (1) "BOARD" MEANS THE BOARD OF DIRECTORS OF A FOREST IMPROVEMENT DISTRICT.
- (2) "DIRECTOR" MEANS A MEMBER OF THE BOARD OF DIRECTORS OF A FOREST IMPROVEMENT DISTRICT.
- (3) "DISTRICT" MEANS A FOREST IMPROVEMENT DISTRICT CREATED PURSUANT TO THIS ARTICLE.

(4) "ELIGIBLE ELECTOR" HAS THE SAME MEANING AS SET FORTH IN SECTION 32-1-103 (5) (A).

32-18-103. Creation. (1) A FOREST IMPROVEMENT DISTRICT MAY BE CREATED IN THE FOLLOWING MANNER:

(A) THE GOVERNING BODY OF A MUNICIPALITY OR COUNTY MAY ENACT AN ORDINANCE OR RESOLUTION PROPOSING THE CREATION OF A FOREST IMPROVEMENT DISTRICT. THE ORDINANCE OR RESOLUTION SHALL SET FORTH THE NAMES OF THE MUNICIPALITIES OR COUNTIES TO BE IN THE PROPOSED DISTRICT AND THE PROPOSED NAME OF THE DISTRICT.

(B) THE GOVERNING BODY OF A MUNICIPALITY OR COUNTY THAT IS NAMED IN THE ORDINANCE OR RESOLUTION PROPOSING THE CREATION OF A FOREST IMPROVEMENT DISTRICT MAY ENACT AN ORDINANCE OR RESOLUTION PROPOSING TO JOIN THE DISTRICT, SETTING FORTH THE NAMES OF THE SAME MUNICIPALITIES AND COUNTIES.

(C) THE CLERK OF A GOVERNING BODY THAT ENACTS AN ORDINANCE OR RESOLUTION PURSUANT TO PARAGRAPH (A) OR (B) OF THIS SUBSECTION (1) SHALL TRANSMIT A CERTIFIED COPY TO THE GOVERNING BODY OF EACH OTHER MUNICIPALITY OR COUNTY NAMED IN THE ORIGINAL ORDINANCE TO BE A PART OF THE PROPOSED DISTRICT.

(D) THE GOVERNING BODY OF A MUNICIPALITY OR COUNTY THAT ENACTS AN ORDINANCE OR RESOLUTION PURSUANT TO PARAGRAPH (A) OR (B) OF THIS SUBSECTION (1) SHALL SUBMIT THE QUESTION OF THE CREATION OF A FOREST IMPROVEMENT DISTRICT INCLUDING THE ENTIRE TERRITORY OF THE MUNICIPALITY OR COUNTY TO THE ELIGIBLE ELECTORS OF THE MUNICIPALITY OR COUNTY AT A GENERAL OR SPECIAL ELECTION CONDUCTED IN ACCORDANCE WITH THE "UNIFORM ELECTION CODE OF 1992", ARTICLES 1 TO 13 OF TITLE 1, C.R.S. THE DISTRICT SHALL BE DEEMED CREATED IF A MAJORITY OF THE VOTES CAST IN THE ELECTION HELD IN ANY MUNICIPALITY OR COUNTY NAMED IN THE ORDINANCE OR RESOLUTION PROPOSING THE DISTRICT ARE IN FAVOR OF THE CREATION OF THE DISTRICT. THE TERRITORY OF THE DISTRICT SHALL COMPRISE THE COMBINED TERRITORY OF ALL MUNICIPALITIES AND COUNTIES IN WHICH THE ELIGIBLE ELECTORS APPROVE THE CREATION OF THE DISTRICT.

32-18-104. Board of directors - appointment - removal. (1) THE ORDINANCE OR RESOLUTION PROPOSING THE CREATION OF A FOREST IMPROVEMENT DISTRICT SHALL SPECIFY THE NUMBER OF DIRECTORS OF THE DISTRICT. A DISTRICT SHALL HAVE NO FEWER THAN SEVEN DIRECTORS. THE GOVERNING BODY OF EACH COUNTY OR MUNICIPALITY IN THE DISTRICT SHALL HAVE THE POWER TO APPOINT AND REMOVE AT LEAST ONE DIRECTOR. THE BOARD SHALL INCLUDE ONE DIRECTOR REPRESENTING THE COLORADO STATE FOREST SERVICE, WHO SHALL BE APPOINTED AND MAY BE REMOVED BY THE STATE FORESTER. THE BOARD SHALL INCLUDE AT LEAST ONE REPRESENTATIVE OF AN ENVIRONMENTAL PROTECTION ORGANIZATION, ONE REPRESENTATIVE OF A CONSERVATION DISTRICT CREATED PURSUANT TO ARTICLE 70 OF TITLE 35, C.R.S., ANY PART OF WHICH IS WITHIN THE PROPOSED FOREST IMPROVEMENT DISTRICT, ONE REPRESENTATIVE OF A WATER CONSERVANCY DISTRICT CREATED PURSUANT TO ARTICLE 45 OF TITLE 37, C.R.S., ANY PART OF WHICH IS WITHIN THE PROPOSED FOREST IMPROVEMENT DISTRICT, AND ONE REPRESENTATIVE OF A FEDERAL LAND MANAGEMENT AGENCY, TO BE APPOINTED AND REMOVED IN THE MANNER PRESCRIBED BY THE ORDINANCE OR RESOLUTION PROPOSING THE CREATION OF THE DISTRICT.

(2) A DIRECTOR APPOINTED TO THE BOARD SHALL SERVE FOR A TERM OF FIVE YEARS UNLESS REMOVED PURSUANT TO SUBSECTION (1) OF THIS SECTION. A DIRECTOR MAY BE APPOINTED TO ADDITIONAL TERMS WITHOUT LIMITATION.

32-18-105. Board of directors - powers and duties. (1) IN ADDITION TO THE POWERS SPECIFIED IN SECTION 32-1-1001, THE BOARD HAS THE FOLLOWING POWERS FOR AND ON BEHALF OF THE DISTRICT:

(A) TO REVIEW ANY REPORTS AND STUDIES MADE AND TO OBTAIN ANY ADDITIONAL REPORTS AND STUDIES IT DEEMS NECESSARY PERTAINING TO THE COST AND IMPLEMENTATION OF FOREST IMPROVEMENT PROJECTS;

(B) TO RECEIVE AND ACCEPT FROM ANY SOURCE AID OR CONTRIBUTIONS OF MONEY, PROPERTY, LABOR, OR OTHER THINGS OF VALUE TO BE HELD, USED, AND APPLIED TO CARRY OUT THE PURPOSES OF THIS ARTICLE SUBJECT TO THE CONDITIONS UPON WHICH THE GRANTS OR CONTRIBUTIONS ARE MADE.

(C) TO DEVELOP REPORTING AND REVIEW REQUIREMENTS GOVERNING THE RECEIPT AND EXPENDITURES OF MONEYS RECEIVED BY THE DISTRICT; AND

(D) TO REVIEW AND TAKE ACTION ON A LANDOWNER'S APPLICATION TO CLAIM THE REIMBURSEMENT AUTHORIZED BY SECTION 32-18-109.

(2) IN EXERCISING ITS POWER UNDER THIS ARTICLE TO ENTER INTO CONTRACTS ON BEHALF OF THE DISTRICT, THE BOARD SHALL:

(A) TO THE EXTENT POSSIBLE, USE COMPETITIVE BIDDING IN ACCORDANCE WITH ARTICLE 103 OF TITLE 24, C.R.S.; AND

(B) GIVE DUE CONSIDERATION TO PERSONS AND BUSINESSES THAT ARE AUTHORIZED TO TRANSACT BUSINESS IN COLORADO.

32-18-106. Financial powers. (1) IN ADDITION TO THE GENERAL FINANCIAL POWERS SPECIFIED IN SECTION 32-1-1101, THE BOARD HAS THE POWER, FOR AND ON BEHALF OF THE DISTRICT, TO:

(A) LEVY AND COLLECT A SALES TAX IN ACCORDANCE WITH SECTION 32-18-107, SUBJECT TO THE REQUIREMENTS OF SECTION 20 OF ARTICLE X OF THE STATE CONSTITUTION; AND

(B) PLEDGE SALES TAX REVENUES OR ANY PORTION THEREOF FOR THE PAYMENT OF ANY INDEBTEDNESS OF THE DISTRICT.

(2) THE ORDINANCE OR RESOLUTION PROPOSING THE CREATION OF A FOREST IMPROVEMENT DISTRICT MAY SPECIFY A LIMIT ON THE AMOUNT OF REVENUE THAT A DISTRICT MAY RECEIVE.

32-18-107. Sales tax - collection - administration. (1) UPON THE APPROVAL OF THE ELIGIBLE ELECTORS IN THE DISTRICT AT AN ELECTION HELD IN ACCORDANCE WITH SECTION 20 OF ARTICLE X OF THE STATE CONSTITUTION AND PART 8 OF ARTICLE I OF THIS TITLE, THE DISTRICT SHALL HAVE THE POWER TO LEVY A UNIFORM SALES TAX THROUGHOUT THE ENTIRE GEOGRAPHICAL AREA OF THE DISTRICT UPON EVERY TRANSACTION OR OTHER INCIDENT WITH RESPECT TO WHICH A SALES TAX IS LEVIED BY THE STATE PURSUANT TO THE PROVISIONS OF ARTICLE 26 OF TITLE 39, C.R.S. A SALES TAX LEVIED BY A DISTRICT SHALL TAKE EFFECT ON EITHER JANUARY 1 OR JULY 1 OF THE YEAR SPECIFIED IN THE BALLOT ISSUE SUBMITTED TO THE ELIGIBLE ELECTORS OF THE DISTRICT.

(2) (A) THE EXECUTIVE DIRECTOR OF THE DEPARTMENT OF REVENUE SHALL COLLECT, ADMINISTER, AND ENFORCE THE SALES TAX AUTHORIZED BY THIS SECTION IN THE SAME MANNER AS THE STATE SALES TAX IMPOSED PURSUANT TO ARTICLE 26 OF TITLE 39, C.R.S., INCLUDING, WITHOUT LIMITATION, THE RETENTION BY A VENDOR OF THE PERCENTAGE OF THE AMOUNT REMITTED TO COVER THE VENDOR'S EXPENSE IN THE COLLECTION AND REMITTANCE OF THE SALES TAX AS PROVIDED IN SECTION 39-26-105, C.R.S. THE EXECUTIVE DIRECTOR SHALL DISTRIBUTE SALES TAX COLLECTIONS TO THE DISTRICT MONTHLY. THE DISTRICT SHALL PAY THE NET INCREMENTAL COST INCURRED BY THE DEPARTMENT OF REVENUE IN THE ADMINISTRATION AND COLLECTION OF THE SALES TAX.

(B) (I) A QUALIFIED PURCHASER, AS DEFINED IN SECTION 39-26-102 (7.5), C.R.S., MAY PROVIDE A DIRECT PAYMENT PERMIT NUMBER ISSUED PURSUANT TO SECTION 39-26-103.5, C.R.S., TO ANY VENDOR OR RETAILER THAT IS LIABLE AND RESPONSIBLE FOR COLLECTING AND REMITTING ANY SALES TAX LEVIED ON ANY SALE MADE TO THE QUALIFIED PURCHASER PURSUANT TO THIS SECTION. A VENDOR OR RETAILER THAT HAS RECEIVED A DIRECT PAYMENT PERMIT NUMBER IN GOOD FAITH FROM A QUALIFIED PURCHASER SHALL NOT BE LIABLE OR RESPONSIBLE FOR COLLECTION AND REMITTANCE OF ANY SALES TAX IMPOSED ON THE SALE THAT IS PAID FOR DIRECTLY FROM THE QUALIFIED PURCHASER'S FUNDS AND NOT THE PERSONAL FUNDS OF ANY INDIVIDUAL.

(II) A QUALIFIED PURCHASER THAT PROVIDES A DIRECT PAYMENT PERMIT NUMBER TO A VENDOR OR RETAILER SHALL BE LIABLE AND RESPONSIBLE FOR THE AMOUNT OF SALES TAX LEVIED ON ANY SALE MADE TO THE QUALIFIED PURCHASER PURSUANT TO THE PROVISIONS OF THIS ARTICLE IN THE SAME MANNER AS LIABILITY WOULD BE IMPOSED ON A QUALIFIED PURCHASER FOR STATE SALES TAX PURSUANT TO SECTION 39-26-105 (3), C.R.S.

(3) A SALES TAX LEVIED IN ACCORDANCE WITH THIS SECTION IS IN ADDITION TO ANY OTHER SALES OR USE TAX IMPOSED PURSUANT TO LAW AND IS EXEMPT FROM THE LIMITATION IMPOSED BY SECTION 29-2-108, C.R.S.

32-18-108. Use of revenue. (1) THE BOARD MAY USE THE REVENUE RECEIVED PURSUANT TO SECTION 32-18-106 TO:

(A) PLAN AND IMPLEMENT FOREST IMPROVEMENT PROJECTS IN WILD LAND-URBAN INTERFACE AREAS, INCLUDING PROJ-

ECTS TO REDUCE HAZARDOUS FUELS AND PROTECT COMMUNITIES, IN COOPERATION WITH THE STATE FOREST SERVICE, THE DIVISION OF PARKS AND OUTDOOR RECREATION IN THE DEPARTMENT OF NATURAL RESOURCES, CONSERVATION DISTRICTS CREATED PURSUANT TO ARTICLE 70 OF TITLE 35, C.R.S., THE UNITED STATES FOREST SERVICE, AND THE FEDERAL BUREAU OF LAND MANAGEMENT AND OTHER AGENCIES IN THE UNITED STATES DEPARTMENT OF THE INTERIOR;

(B) ESTABLISH FINANCIAL INCENTIVES FOR PRIVATE LANDOWNERS TO MITIGATE WILDFIRE RISKS ON THEIR PROPERTY, INCLUDING REIMBURSEMENT OF EXPENSES PURSUANT TO SECTION 32-18-109;

(C) ESTABLISH INCENTIVES FOR LOCAL WOOD PRODUCTS INDUSTRIES TO IMPROVE THE USE OF OR ADD VALUE TO SMALL-DIAMETER OR BEETLE-INFESTED TREES;

(D) MATCH STATE AND FEDERAL GRANTS FOR BIOHEATING CONVERSION AND INFRASTRUCTURE SUPPORT FOR BIOMASS COLLECTION AND DELIVERY; AND

(E) ASSIST THE STATE FOREST SERVICE IN ENSURING THAT ALL COMMUNITIES AT RISK OF WILDFIRE WITHIN THE DISTRICT HAVE ADOPTED A COMMUNITY WILDFIRE PROTECTION PLAN AND ARE USING APPROPRIATE PLANNING, EDUCATION, AND OUTREACH TOOLS.

32-18-109. Wildfire mitigation measures - private land - reimbursement. (1) A LANDOWNER WHO PERFORMS WILDFIRE MITIGATION MEASURES ON HIS OR HER LAND IN A DISTRICT IN ANY YEAR MAY REQUEST REIMBURSEMENT FROM THE DISTRICT, IN AN AMOUNT NOT TO EXCEED FIFTY PERCENT OF THE LANDOWNER'S DIRECT COSTS OF PERFORMING THE WILDFIRE MITIGATION MEASURES IN THAT YEAR OR TEN THOUSAND DOLLARS, WHICHEVER IS LESS.

(2) A LANDOWNER WHO PERFORMS WILDFIRE MITIGATION MEASURES ON HIS OR HER LAND MAY REQUEST REIMBURSEMENT FROM A DISTRICT IN ACCORDANCE WITH THIS SECTION IF THE WILDFIRE MITIGATION MEASURES ARE:

(A) PERFORMED WITHIN THE BOUNDARIES OF THE DISTRICT;

(B) PERFORMED IN A WILD LAND-URBAN INTERFACE AREA;

(C) AUTHORIZED BY A COMMUNITY WILDFIRE PROTECTION PLAN ADOPTED BY A LOCAL GOVERNMENT WITHIN THE DISTRICT; AND

(D) APPROVED BY THE BOARD.

(3) A LANDOWNER WHO INTENDS TO REQUEST REIMBURSEMENT FROM A DISTRICT AS AUTHORIZED BY THIS SECTION SHALL FILE AN APPLICATION WITH THE BOARD IN THE FORM PRESCRIBED BY THE BOARD. IF THE BOARD DETERMINES THAT THE WILDFIRE MITIGATION MEASURES PERFORMED BY THE LANDOWNER MEET THE REQUIREMENTS OF THIS SECTION, THE BOARD MAY REIMBURSE THE LANDOWNER IN AN AMOUNT DETERMINED BY THE BOARD IN ITS DISCRETION; EXCEPT THAT THE AMOUNT OF REIMBURSEMENT PAID TO A LANDOWNER IN ANY YEAR SHALL NOT EXCEED FIFTY PERCENT OF THE LANDOWNER'S DIRECT COSTS OF PERFORMING THE WILDFIRE MITIGATION MEASURES IN THAT YEAR OR TEN THOUSAND DOLLARS, WHICHEVER IS LESS.

SECTION 3. 29-2-108 (3), Colorado Revised Statutes, is amended to read:

29-2-108. Limitation on amount. (3) A tax imposed pursuant to ~~section 24-90-110.7 (3) (f), 29-1-204.5 (3) (f.1), 29-2-103.7, 29-2-103.9, 30-11-107.5, 30-11-107.7, or 37-50-110~~ SECTION 24-90-110.7 (3) (f), 29-1-204.5 (3) (f.1), 29-2-103.7, 29-2-103.9, 30-11-107.5, 30-11-107.7, 32-18-107, or 37-50-110, C.R.S., and the additional tax authorized by section 30-20-604.5, C.R.S., if imposed, shall be exempt from the six and ninety one-hundredths percent limitation imposed by subsection (1) of this section.

SECTION 4. Safety clause. The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

Approved: April 9, 2007

Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.