

# **GREENING THE BUDGET**

## **12 Ideas for Protecting the Environment and Easing New Hampshire's Fiscal Crisis**

NHPIRG Education Fund

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# EXECUTIVE SUMMARY

Political leaders and the public are heavily focused on resolving New Hampshire's budget problems. However, the state's budget crisis does not mean that other issues such as environmental protection may be ignored. Rather, the budget crisis requires a creative approach to maintaining or even extending environmental protection programs. Updating existing fees or levying new ones on environmentally harmful activities can provide the funding necessary for protecting the environment and potentially help ease the state's budget problems.

The state of New Hampshire has established many oversight and cleanup programs to protect the environment. Some are funded solely through General Fund allocations. Others receive some revenue from fees paid by polluters or from charges levied on activities that can potentially cause environmental damage. The current budget crunch has forced cuts in General Fund support for these programs and inflation has reduced fee-based revenue in cases where the fees have not been indexed to inflation. Both factors jeopardize the environment and public health.

Instituting new fees or levying greater fees on environmentally harmful activity will protect the environment, allow environmental protection programs to achieve what they were designed to achieve, and ease the burden on the General Fund.

- Lack of funding has undermined the state's ability to enforce construction permits designed to protect wetlands from serious degradation. Raising wetland impact permit fees would generate an additional \$624,000 and enable the state to hire enough staff to protect the wildlife habitat and natural drinking water filtration provided by wetlands.

- Inflation has eroded the state's designated income stream for reviewing proposed and installed septic systems to ensure they are not polluting water supplies, forcing subsidies from the General Fund. Adjusting fee levels could save the General Fund \$500,000 annually.

A second set of fees would enable the state to better protect the environment by accelerating the rate of current cleanups, and by forestalling future problems.

- New Hampshire needs to close approximately 160 unlined landfills to protect groundwater—a prime source of the state's drinking water—from precipitation leaching through trash. A \$2-per-ton solid waste disposal fee would provide funds to speed up the pace of cleanups, reduce potential pollution of groundwater, and provide an incentive to boost recycling.
- Demand has outstripped funding for oil recycling programs, which provide residents an alternative to throwing oil in the trash or pouring it down the sewer where it can contaminate soil and water. Raising the fee imposed on motor oil when it is imported into the state would make proper used oil disposal available to everyone who seeks it.

Finally, large-scale, ongoing pollution from a variety of sources could be discouraged by assessing a fee to generate new revenue for the General Fund. Such a fee could increase the state's income by targeting a socially undesirable activity.

- Greenhouse gases released through the burning of fossil fuels are causing the earth’s atmosphere to warm and will dramatically affect the environment. Industry in New Hampshire produces the equivalent of five million tons of carbon dioxide each year, but does not pay anything for the resultant harm. A fee of \$0.15 per ton of carbon dioxide would generate \$1.4 million for New Hampshire annually.
- Industry in New Hampshire produces over 29,000 tons of

hazardous wastes annually. Cleaning up environmental problems from such waste costs the state \$1 million, far more than it recoups through fees. Increased fees would pay for cleanup costs, discourage production of dangerous wastes, and produce \$1.7 million to \$5.8 million in revenues for the state.

These and other fees will help to better protect our environment while generating income that will alleviate the need for cuts to environmental protections and other important state programs.

**Table 1. Fee options**

<b>Program</b>	<b>Additional Annual Revenue (minimum)</b>
Pesticide registration	\$450,000
Sludge testing	\$22,400
Septic system review	\$1,000,000
Wetland impacts	\$624,000
Solid waste disposal	\$3,428,000
Automotive oil imports	\$78,125
Toxic chemical releases	\$786,000
Hazardous waste generation	\$1,150,000
Groundwater withdrawal	\$100,000
Industrial greenhouse gas emissions	\$1,480,000
Vehicle waste disposal	varies by community
Development impact fees	varies by community
<b>Total</b>	<b>\$9,038,525</b>

# INTRODUCTION

Taxation is the fundamental tool used by communities to ensure access to those goods and services which the operation of the free market either will not provide or will provide only imperfectly. Generally, taxes are used to pay for shared services—like police and fire protection, roads, public schools—or for fulfilling socially shared values—such as supporting the elderly or protecting the environment. How tax money is spent reflects social priorities; so too should how taxes are collected. The choice of what to tax has implications for what activities are encouraged or discouraged, because taxing an activity is a way to discourage it.

Both New Hampshire and the nation suffer from tax systems that subsidize pollution and penalize business activity. The pollution subsidy operates through prices, taxes, and outright gifts of public dollars and resources to polluters. Product prices, for example, exclude the costs of cleaning up lakes and streams contaminated by producing the product; the costs of disease from air pollution emitted by the product; and the cost of cleaning up the toxic waste site used to dispose of the product. Thus, public funds applied to addressing these problems have the effect of making it no more expensive for private companies to pollute than for them to protect the environment. Adding insult to injury, the federal tax code rewards pollution: polluters can deduct all costs related to illegal pollution, including the costs for lawyers hired to delay or avoid cleaning up toxic sites.

The penalty occurs in the form of taxes on general economic activity as measured through labor and business profits. Taxing employment or business success discourages those desirable activities.

These backwards policies impose enormous environmental and economic consequences. Over 50 million pounds of toxic

chemical wastes are produced in New Hampshire each year. Ever-expanding development threatens wetlands, which provide natural filtering processes that protect water quality. The average New Hampshire household disposes of 15.5 pounds of hazardous waste each year.<sup>1</sup> Dumped into the ground or thrown into a landfill, this waste can pollute groundwater and harm wildlife.

Though existing state programs are designed to ameliorate these and other threats, growing revenue shortfalls require cutting environmental programs or finding new sources of revenue, and the state is reluctant to raise taxes on business activity. Part of that reluctance may stem from the recognition that the current tax structure distorts the economy: it penalizes the “goods” (general economic activity) and rewards the “bads” (pollution and environmental damage).

New Hampshire may not be prepared to immediately shift the base of its tax system, but it can nonetheless take the first steps toward correcting the distortions imposed by taxing economic activity rather than pollution. Increasing existing fees or assessing new fees on socially undesirable activities would discourage pollution and environmental destruction and ease the state’s budget shortfall.

New Hampshire faces a significant financial challenge. The state ended the 2002 fiscal year with a General Fund and an Education Fund combined shortfall of \$37.9 million.<sup>2</sup> By the end of June 2003, that gap between revenue and spending needs is expected to widen to \$80 million.<sup>3</sup>

Environmental fees generate revenue that can be used to pay for oversight programs—including the staff time involved in issuing permits or monitoring activity—or for cleanup of environmental damage. As a result, less state General Fund money is

necessary for environmental protection programs and can be used for other purposes.

More broadly applied, fees on environmentally harmful activity can provide revenue straight to the General Fund. Collecting revenue from those who cause environmental damage or degrade a natural resource improves the equity of paying for environmental protections. Polluters, not the public, should pay for oversight and cleanup. Companies that take a public good, such as clean water, to earn private profit should compensate the public for use of that communally-owned resource.

Fees on potentially hazardous activity can also act as an insurance premium. If, for example, all users of potentially leaky underground fuel storage tanks regularly pay a small fee into a cleanup fund, money

is available immediately to pay for cleaning up spills even if the business that caused the spill does not have the necessary financial resources. The insurance fund avoids forcing taxpayers to fund cleanups if the corporation that caused the damage has run out of money.

Most importantly, requiring polluters to pay can change behavior and improve environmental protection. When polluters feel a financial impact from the damage they cause, they have an incentive to shift away from harmful activities.

Adopting environmentally-targeted fees can help New Hampshire deal with both its budget shortfall and pressing environmental concerns. This will also move the state closer to a tax system that discourages unwanted behavior, not positive economic activity.

# PESTICIDE REGISTRATION

## PURPOSE

Fund existing environmental program

Raise general revenue

## ADDITIONAL FUNDS GENERATED

\$450,000

Many pesticides—chemicals used to control insects, weeds, rodents, and other organisms—pose a toxic risk to humans. Homeowners, farmers, professional applicators and others use more than 20,000 pesticides nationally but there is no central record of the total tons applied.<sup>4</sup> Professional, non-agricultural application of pesticides represents just 12 percent of pesticide use in the U.S.<sup>5</sup> Minimizing pesticide use through integrated pest management—efforts that employ multiple approaches to controlling pests—can reduce human exposure to these toxic chemicals.

New Hampshire's Division of Pesticide Control oversees pesticide use in the state by licensing pesticide applicators and by registering pesticides sold in the state, and promotes alternatives to pesticide use through its integrated pest management program.<sup>6</sup> Registered pesticide applicators and people seeking permits to apply pesticides in a particular location pay small fees to the department, providing \$26,000 in funding annually.<sup>7</sup> A greater source of income is pesticide registration fees paid by pesticide manufacturers, most of whom are not based in New Hampshire. Every type of pesticide that is to be sold in New Hampshire must be registered with the division at a cost of \$50 per pesticide, a fee level established in the mid-1990s. This generates \$450,000 annually that is deposited in the General Fund.<sup>8</sup>

Despite the total revenue that the Division of Pesticides brings in, the department faces budget cuts that will impair its ability to protect the environment and public health. Not all the money that the department deposits in the General Fund is used to support pesticide regulation. The department's total expected fiscal year 2004

budget is \$252,083, down from \$310,242 in 2003. \$176,083 will come from the General Fund.<sup>9</sup> Local funds and licensing fees will supply the remainder of the budget and are not projected to change between 2003 and 2004. This budget cut will force the elimination of two of seven staff positions.<sup>10</sup> As a result, the division will process application permits and collect registration fees more slowly, and undertake fewer enforcement actions.

Both the division's pesticide control efforts to protect the environment and the state budget would benefit from an increase in pesticide registration fees. Raising the fee from \$50 to \$100 would contribute an additional \$450,000 to the General Fund. With this fee increase, the Legislature should also allocate more funds to the Division of Pesticide Control to maintain current staffing and oversight levels.





# SLUDGE SPREADING

**W**astewater treatment and industrial processes separate pollutants from water before the water is released back into streams and rivers. These solid residues, containing metals, bacteria, viruses, parasites, and organic contaminants such as pharmaceuticals, need to be disposed of. Dumping them in the ocean was banned in 1992 to protect the marine environment.<sup>11</sup> Since then, producers of sludge have turned to land application to dispose of sludge—waste that is too hazardous to be released into waterways is spread on land as fertilizer or as extra soil. According to federal guidelines, sludge without detectable pathogens is considered clean enough to be distributed to the general public and therefore is largely unregulated. Sludge with pathogens, arsenic, copper, lead, mercury, and other pollutants has more restricted use.<sup>12</sup> The federal Environmental Protection Agency rules for sludge application may be outdated, however, and thus even sludge that passes federal tests may threaten public health.<sup>13</sup>

Despite these risks, sludge-spreading still occurs in New Hampshire. The state considers cropland, rangeland, golf courses, baseball fields, highway medians, closed gravel pits, and many other locations as potentially acceptable areas for sludge spreading. No matter where sludge is spread, it can leach pollutants into groundwater or run into surface waters, impairing drinking water supplies and threatening wildlife. In 2001, the state spread more than 25,000 tons of potentially dangerous sludge over 1,500 acres.<sup>14</sup>

The Department of Environmental Services regulates sludge-spreading in New Hampshire. One of its tools for protecting public health is testing sludge for contamination that exceeds standards. Both sludge generators and the state test wastes. Each

sludge-generating facility, whether in state or out of state, that wants to apply its sludge to land in New Hampshire must apply for a permit, pay a \$1,000 fee, and test its sludge for 177 contaminants (out of the many thousands potentially in sludge) four times at least two months apart.<sup>15</sup> To maintain that permit, a facility needs to test its sludge annually during the five-year permit period. The composition of sludge, however, can change on a daily basis and thus present a different threat each day. Annual testing cannot reveal this range of pollutants.

In 2001, there were 32 active sludge quality permits, three for out-of-state generators, seven for in-state private generators, and 22 for in-state municipal generators.<sup>16</sup> All applicators must obtain a five-year site-specific permit before spreading any sludge. Permit fees, established in 1996, range from \$100 to \$300 depending on the acreage over which sludge will be spread.<sup>17</sup> There are 36 active site permits. (Municipal generators and spreaders do not pay these fees because the New Hampshire Constitution bans unfunded mandates from the state to municipalities.)

## PURPOSE

Fund existing environmental program

## ADDITIONAL FUNDS GENERATED

\$14,400 to \$28,800

**Table 2. Cost of a five-year sludge application permit<sup>18</sup>**

Acres of Sludge Application	Current Fee	Proposed Fee
< 5	\$100	\$2,000
5-10	\$150	\$3,000
>10	\$300	\$4,000

**Table 3. Cost of a five-year permit for other methods of sludge disposal conducted off-site<sup>19</sup>**

Method	Cost
Composting	\$500
Treating, processing, landfilling	\$1,000



The department tests sludge after its application to ensure that permit-holders are correctly reporting the contents of what they are spreading. Testing is one of the state’s best ways to ensure that compliance. However, soil and water testing is expensive—installing a groundwater-monitoring well costs at least \$15,000 and a single battery of tests at one site can cost \$1,000 to \$2,500.<sup>20</sup> In the past several years, the department has received \$85,000 from the General Fund for sludge testing. Funding at this level enabled the department to test 22 to 25 sites annually. This means that in 2001, when there were 36 application sites, over half were tested.<sup>21</sup> Now, State Revolving Fund monies that had been available in previous years have dried up and the department may not receive any General Fund money with which to conduct tests.<sup>22</sup>

The only definite funding for sludge testing will be from \$12,000 of collected fees.<sup>23</sup> (Federal funds pay for almost all other departmental expenses, including staff salaries.)

Pre-permit and on-going testing by sludge generators and applicators is an important component of sludge regulation, as is verification of those tests by the state. With funding reduced to \$12,000 per year, the state will conduct tests at only a fraction of sludge application sites. Higher fees would help pay for more oversight and testing and better protect public health and the environment. Raising the generator fee to \$4,000 would produce \$8,000 per year. Increasing the five-year spreading permit fees as shown in Table 2 would provide at least \$14,400 and could produce as much as \$28,800 annually.

**Table 4. Calculation of sludge fee revenue**

Who Pays	Five-Year Permit Fee	Annual Revenue
10 generators who pay fees	\$4,000	\$8,000
36 spreading sites	\$2,000 - \$4,000	\$14,400 - \$28,800
Total		\$22,400 - \$36,800

# SEPTIC SYSTEMS

To protect water quality, the state seeks to ensure septic systems are properly designed and installed. The Subsurface Systems Bureau reviews applications for land subdivisions that will involve septic systems, reviews individual septic system designs, and inspects all installed systems. The department annually reviews 3,200 applications to subdivide land to ensure that lot size is large enough to allow for a septic drainage area, that the land is not too close to sensitive waterways, that the soil and slope are suitable for septic drainage, and other factors. A subdivision cannot be approved unless the bureau is satisfied with the septic plan. The bureau reviews the design of 9,600 septic systems and conducts 9,000 site inspections annually.<sup>24</sup> In addition, the department issues permits to designers and installers of septic systems.

Applicants pay a fee ranging from \$40 for a license to \$90 for review of septic system design.<sup>25</sup> Annually, the department collects over \$1 million in fees and spends \$1.5 million. The shortfall is covered by the state's General Fund, but that was not the Legislature's intention when it created the Subsurface Systems Bureau. The Legislature wanted the fees to cover the bureau's costs, but did not index the fees to inflation. As a result, the fees are now inadequate to cover the cost of reviews and inspections.

Doubling the fees would produce \$2 million in revenue and more than cover the program's costs. By indexing the new fee scale to inflation, the program's long-term financing could be assured.

## **PURPOSE**

**Fund existing environmental program**

## **ADDITIONAL FUNDS GENERATED:**

**\$1 million**

# WETLAND PROTECTION

## PURPOSE

Fund existing environmental program

Enable stronger environmental protection

## ADDITIONAL FUNDS GENERATED

\$624,000

Over 180,000 acres in New Hampshire—3.1 percent of the state—are classified as wetlands.<sup>26</sup> Wetlands in New Hampshire are protected by federal and state law because they provide valuable habitat for birds, retain water from storms, and filter pollutants from water. Within the state, New Hampshire's wetlands law is administered by the Wetlands Bureau in the Department of Environmental Services.

The Wetlands Bureau evaluates proposed development that might impact a wetland, enforces laws protecting wetlands, and educates the public and builders about the importance of protecting wetlands. Inadequate funding, however, prevents the bureau from carrying out all its responsibilities. Though the bureau is slated to have 31 full-time and five part-time staff, it has not had funding to fill all positions. At the end of 2002, the department had five full-time and two part-time positions open due to lack of money.<sup>27</sup>

As a result of understaffing, the department is unable to investigate all suspected violations of building permits or of wetland protection laws. In addition to any new cases, a backlog of 1,800 existing cases needs to be dealt with.<sup>28</sup> Many of these may be substantial violations. In 2001 and 2002, the depart-

ment surveyed all projects on the shores of Lake Winnepesaukee and Lake Sunapee to assess the compliance rate for permits issued in 1997 and 1998. Slightly more than half of permit holders had complied with their permits, one-fifth had minor paper violations, and more than a quarter had violations involving wrong building size or location and other significant problems.<sup>29</sup> Greater funding should allow the department to process permit applications more rapidly and investigate a higher percentage of potential violations.

Additional funding would enable the Wetlands Bureau to more aggressively protect wetlands and to function more quickly

**Table 5. Wetlands Bureau fiscal year 2002 budget by funding category<sup>30</sup>**

	Budget	Percent of Total Budget
Wetlands Fee Account	\$782,664	48%
State General Funds	\$388,613	24%
Federal Funds	\$449,907	28%
Total	\$1,621,184	100%



and smoothly. Federal and state funds provide half of the department's money. Permit fees and fines generate nearly \$500,000 annually. Several years of above-average fees and fines gave the bureau extra funds but that surplus has nearly been spent. Fees for wetland modification are \$0.04 per square foot of requested impact or \$50, whichever is higher.<sup>31</sup> The Legislature,

which has shown some interest in updating the fee, last increased it in 1998 from \$0.025 to \$0.04 per square foot.<sup>32</sup> Increasing the fees as indicated in Table 6 would generate \$624,000 more than current fee levels.<sup>33</sup> This additional money would allow the Wetlands Bureau to fill open staff slots and deal with more permits and compliance cases per year.

**Table 6. Current versus proposed fees for wetlands modification<sup>34</sup>**

	Now	Proposed
<b>Dredge, fill, or construction permit</b>	\$50 or impact fee, whichever is higher	\$100 plus impact fee
<b>Impact fee</b>		
Permanent dock	\$100	\$1 per square foot
Temporary dock	\$100	\$.50 per square foot
Dredge or fill	\$0.04 per square foot	\$.10 per square foot
<b>Terrain alteration permit</b>		
50,000-200,000 square feet	\$100	\$500
Additional 100,000 square feet	\$100	\$200

# SOLID WASTE DISPOSAL

## PURPOSE

Enable stronger environmental protection

## ADDITIONAL FUNDS GENERATED

**\$3,428,000**

New Hampshire generates 1.1 million tons of solid waste per year and imports another 750,000 tons.<sup>35</sup> Of that imported trash, approximately 75 percent comes from Massachusetts.<sup>36</sup> One reason why the state imports so much trash is that garbage tipping fees in New Hampshire are lower than for most neighboring states, making New Hampshire a relatively cheaper state to which to export waste.<sup>37</sup> Municipalities may pay for trash disposal through general revenues or collect a designated fee from residents to cover the cost of disposal. The latter option creates the possibility of linking the fee to the quantity of trash generated, making wastefulness expensive and encouraging recycling and conservation.

The state should encourage the prudent use of resources by raising the cost of throwing things away. A fee of \$2 per ton on all trash disposed of in New Hampshire, whether it came from in state or out of state, would generate \$3,428,000 annually.<sup>38</sup> Because out-of-state trash haulers and others would also pay this fee, revenues could be structured so that many towns would receive a refund on their portion of the trash fee.

One use for greater trash disposal fees would be to support recycling efforts. The New Hampshire Legislature established a

goal of recycling 40 percent of the state's waste, but recycling rates are not anywhere near that high. Funds from a trash fee could pay for curbside recycling and yard waste programs. Increasing recycling and reducing the amount of waste sent to landfills would help preserve landfill space throughout the state and postpone some costly landfill closures.

Alternatively, higher trash fees could be used to offset the cost of landfill closures. New Hampshire has 500 solid waste facilities, many of which are unlined landfills.<sup>42</sup> Unlined landfills can create environmental and health hazards because water percolating through the waste can carry contaminants into groundwater and streams. Delaying landfill closure can add to cleanup costs by allowing greater leaching of pollutants. Eighty-four unlined landfills that once accepted municipal waste have been closed and capped, nearly 160 unlined landfills that operated after 1981 have quit accepting municipal waste but not all have yet been capped, and another six unlined landfills continue to operate but are expected to close within the next year.

These pending closures represent a significant financial obligation for the state and municipalities. Closing a landfill often requires capping the site so that precipitation does not run into the waste; venting the cap

### Another Approach

A number of New Hampshire communities use a different system, known as "pay-as-you-throw." One such program was established by Peterborough in 1999, when the town ceased subsidizing trash disposal with taxes and created a pay-as-you-throw system in which residents pay for each bag of trash. Pay-as-you-throw is designed to encourage recycling and waste reduction, by scaling the cost of trash disposal to the amount of trash generated.<sup>39</sup> Empty bags may be purchased from a number of local stores at a cost of \$0.75 for 17-gallon bags or \$1.50 for 33-gallon bags.<sup>40</sup> Recycling, which is still subsidized by taxes, is free. In 2002, the town collected \$61,885 from the sale of bags and spent \$54,755 disposing of municipal solid waste and purchasing bags in bulk.<sup>41</sup> The surplus will be saved to offset future increases in the cost of bags and trash disposal.

allows gasses produced by decomposing waste to escape.<sup>43</sup> Closure costs average \$150,000 per acre.<sup>44</sup> The state estimates that the total remaining cost of landfill closures will be \$155 million to \$175 million.<sup>45</sup> A trash disposal fee that generates \$3,428,000 annually would help offset some of the cost of landfill closure and potentially increase the number of sites capped in coming years.

Through the Unlined Municipal Landfill and Incinerator Closure Grant Programs, the state reimburses municipalities 20 percent of the capital cost of closing unlined landfills or incinerators.<sup>46</sup> Since the landfill closure program's inception in July 1995, the Department of Environmental Services has awarded 108 grants worth \$24 million, though as of July 2002 only \$14

million had been paid.<sup>47</sup> The outstanding \$10 million represents future obligations. The program, which receives money from the General Fund, will likely be funded at a lower level in coming years. In addition to the 50 sites slated to receive further funds from the state, another 23 sites were on the list of projected closures and grant obligations for 2003.<sup>48</sup> (The recent passage of state legislation that excuses unlined landfills owned by small towns from the formal closure process will reduce local governments' costs by \$3.6 million and state government's costs by \$1 million.<sup>49</sup> Though the bill requires monitoring of these landfills, this solution fails to provide the same degree of environmental protection as properly capping unlined landfills.)

# AUTOMOTIVE OIL

## PURPOSE

Enable stronger environmental protection

## ADDITIONAL FUNDS GENERATED

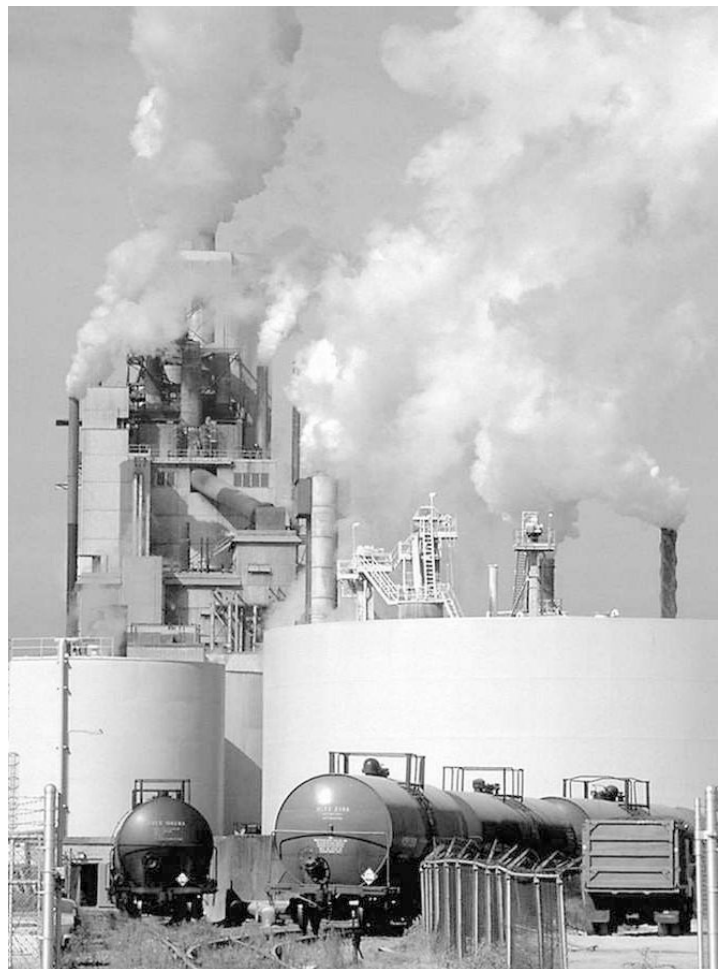
\$78,125

Automotive oil lubricates car engines. Its frequent replacement protects the engine, but also generates waste. If dumped down a storm drain or thrown in the trash, oil can threaten water supplies. Contaminants in the oil, such as lead, arsenic, barium, cadmium, chromium, and chlorinated hydrocarbons, threaten human health. The state's Used Oil Collection program provides residents with one option for appropriate oil disposal. (Another is the locally funded and operated Vehicle Waste Disposal program.)

The state of New Hampshire charges a fee of \$0.02 per gallon of automotive oil at the time it is imported into the state.<sup>50</sup> The money is deposited in the Hazardous Waste Cleanup Fund (HWCF).<sup>51</sup> The Used Oil Collection program provides grants to pay for creation or operation of used oil collection centers and it funds efforts to educate people about proper oil disposal.<sup>52</sup> The collection centers accept oil from people who service their own cars. The program collects approximately \$125,000 per year, but current expenses are close to \$190,000 per year.<sup>53</sup> In the late 1990s, when fewer towns participated (and presumably more oil was dumped), the program accumulated a surplus which has helped to cover recent shortfalls. That more towns are participating is good news, but funding the program with previous years' surpluses



is not a permanent solution. The automotive oil fee should be raised to \$0.0325 per gallon to cover the current costs of the Used Oil Collection program.





# TOXIC CHEMICAL RELEASES

In 1990, Minnesota passed the Toxic Pollution Prevention Act to discourage the use of toxics.<sup>54</sup> The state created a pollution prevention assistance program to disseminate techniques and processes that reduce pollution. The program is funded through pollution prevention fees paid by facilities that report air, water, or ground releases of chemicals listed in the federal Toxics Release Inventory (TRI) and by large quantity generators of hazardous waste if they are not required to report to TRI.<sup>55</sup>

TRI-reporting facilities annually pay \$500 or \$0.02 per pound, whichever is higher, plus \$150 for each pollutant released.<sup>56</sup> Hazardous waste generators that produce over 100 kilograms of hazardous waste per month must pay \$500 per year.<sup>57</sup> These pollution prevention fees yielded \$1,252,276 for Minnesota in 2001.<sup>58</sup>

New Hampshire currently has an emissions-based fee program in place that assesses a charge for air emissions of toxic and criteria air pollutants, but this program does not address air emissions from all sources, or toxic releases to the water or land. In addition, it does not include emis-

sions from sources that do not require a federal or state air permit. The Department of Environmental Services currently assesses a fee of \$64 per ton (\$0.032 per pound) on air pollution emissions from all sources requiring an air pollution emissions permit, including emissions of over 750 regulated toxic air pollutants included in the state air toxics control program.<sup>59</sup> While emissions of “criteria” pollutants from the combustion of wood, coal, and virgin petroleum products are included in this program, their emissions of “toxic” air pollutants are currently exempt.

Although power plants burning these exempt fuels do not pay a fee based directly on their TRI emissions, they do pay a fee based on emissions of volatile organic compound and particulate matter releases, which indirectly include many air toxics. In addition, since New Hampshire’s air toxics control program is based on the concentration of pollution that reaches people that breathe the air rather than the amount that is released, and because these power generators usually employ tall smokestacks that significantly dilute emissions before

## PURPOSE

**Discourage pollution;  
raise general  
revenue**

## ADDITIONAL FUNDS GENERATED

**\$786,000**



**Table 7. New Hampshire TRI chemical waste (in pounds) in 2000<sup>62</sup>**

	Released Into Air	Released Into Water	Released Onto Land	Burned for Energy	Recycled	Treated
Pounds of Waste	5,411,035	95,776	64,886	3,149,403	27,753,255	14,781,975
New Fee		\$0.032	\$0.032	\$0.032	\$0.016	\$0.016
Revenue Generated		\$3,065	\$2,076	\$100,781	\$444,052	\$236,512

they reach the ground, their emissions of toxic air pollutants would probably not require a permit for air toxics releases even if they were subject to the regulation.

The state could craft a more comprehensive emissions fee system that could generate more income, while at the same time providing an economic incentive to encourage emissions reductions. Releases of toxic chemicals are undesirable, no matter the source or receiving media. Industry in New Hampshire annually releases 180,000 pounds of known carcinogens such as cadmium and arsenic, tens of thousands of pounds of suspected carcinogens, 200,000 pounds of known developmental toxics such as mercury, and millions of pounds of suspected toxics.<sup>60</sup> Most of these toxic pollutants have serious health effects whether they are ingested or inhaled, so all emissions to the environment should be subject to the emissions-based fee program. Power plants may be able to dilute the impact of their pollution, but the environmentally preferable option would be to reduce emissions overall, so dilution should not be rewarded financially.

The reporting infrastructure is in place for a broader fee. The federal Pollution Prevention Act of 1990 requires facilities to report chemical wastes and chemical releases above a certain size. In 2000, New Hampshire industry reported creating 52 million pounds of toxic chemical waste.<sup>61</sup> Even if fees collected on air releases are not expanded to cover all air emissions, implementing a comparable fee of \$0.032 per pound of toxic chemical wastes released into the ground or water would generate \$5,000 per year. Wastes that are burned—producing some energy but also creating hazardous air pollution—should be charged at the same rate. This would yield \$100,000 per year. Though it clearly would be preferable if the wastes were not created in the first place, recycling or treating them once the waste is created is an environmentally better option than releasing or burning them. Recycled or treated wastes could be charged \$0.016 per pound, half the rate of burned or released wastes. This would produce \$680,000 annually. Total, the fees would yield an additional \$786,000 per year.

# HAZARDOUS WASTE CLEANUP

**P**etroleum naphtha (a parts cleaner), mercury, toxic metals, and lead are examples of hazardous waste—substances that are flammable, corrosive, caustic, explosive, or toxic and that threaten human health, drinking water quality, and wildlife. Groundwater contamination is of particular concern in New Hampshire because the state is heavily reliant on shallow, easily-polluted aquifers.<sup>63</sup>

Industry in New Hampshire produces over 29,000 tons of hazardous waste per year, according to the Department of Environmental Services (DES).<sup>64</sup> Paper mills, power generators, foundries, and electronics manufacturers are just a few of the sources of this waste. Producing toxic chemicals for inclusion in a product creates a more dangerous product, accidental releases during transit or production can jeopardize a community, and disposal is costly.

The state of New Hampshire spends over \$450,000 annually to oversee the cleanup of hazardous waste sites, to enforce rules about transportation of hazardous waste, and to issue permits to hazardous waste generators.<sup>67</sup> Hazardous waste en-



forcement actions undertaken by the Department of Justice cost nearly \$150,000 annually. Another \$400,000 is spent investigating problems and on emergency clean-ups.<sup>68</sup> Despite this level of activity, DES has too little capacity to inspect small operations (producers of less than 220 pounds of waste per month); at the current inspection rate, the department would visit each facility only once every 170 years.<sup>69</sup>

Generators of hazardous waste pay no more than \$0.03 per pound (\$60 per ton) of unrecycled hazardous waste if they generate more than 661.5 pounds of hazardous waste in a three-month period. The minimum quarterly fee is \$50.<sup>70</sup> If a facility receives hazardous waste from out of state

## PURPOSE

Fund existing environmental programs

## ADDITIONAL FUNDS GENERATED

\$1.15 – \$5.25 million

### Hazardous Waste Cleanup Fund

New Hampshire created the Hazardous Waste Cleanup Fund (HWCF) in 1981 to pay for proper cleanup of hazardous waste. The fund also pays for other environmental protection measures. New Hampshire spends over \$100,000 per year from the HWCF on its pollution prevention program, offering technical assistance and education to businesses on reducing their use of harmful chemicals.<sup>65</sup> The HWCF spends \$45,000 annually to encourage the cleanup of brownfields—contaminated sites that have been abandoned by the party responsible for causing the problem—by providing liability protection for parties who agree to clean up or redevelop a contaminated site.<sup>66</sup> Brownfield redevelopment reduces pressure to develop greenfields and thus helps curtail sprawl. The Household Hazardous Waste Program subsidizes community waste collection events with funds from the HWCF, providing residents an alternative to throwing dangerous waste into landfills where it could contaminate soil and water. A higher fee on hazardous waste generation could provide funding for these and other programs.

**Table 8. Fee charged per pound of hazardous waste generated**

	<b>Current Fees</b>	<b>Proposed Fees</b>
Recycled Waste	\$0	\$0.03 per pound
Out-of-State Waste for Recycling	\$0.003 per pound	\$0.03 per pound
Disposed Waste	\$0.03 per pound	\$0.10 per pound

for treatment, storage, or disposal, then the fee is \$0.003 per pound.<sup>71</sup> Waste generators who recycle their wastes pay nothing. The fee schedule was last modified in 1990.<sup>72</sup> In total, New Hampshire collects \$550,000 through fees from hazardous waste generators annually.<sup>73</sup>

Companies responsible for releases of hazardous wastes are supposed to pay for cleanup work performed by the state. In fiscal year 2002, New Hampshire was able to recoup \$172,300 from three parties.<sup>74</sup>

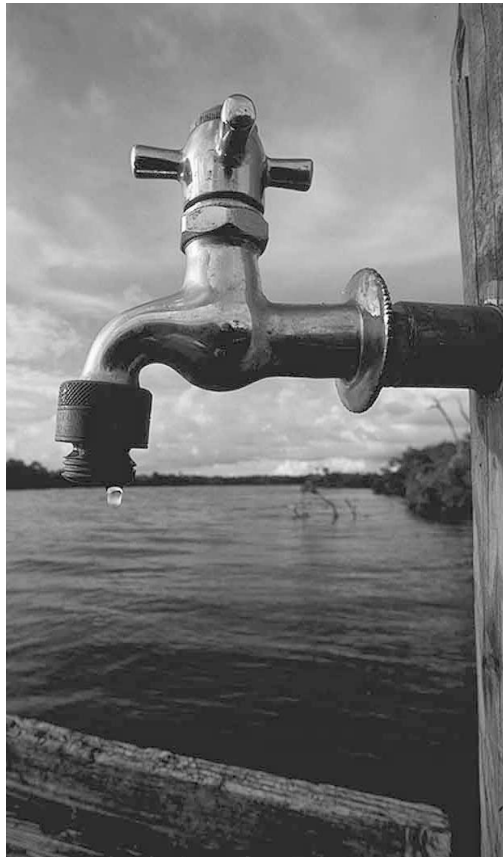
New Hampshire would be better off environmentally if the state imported or generated less hazardous waste. The state's financial position would be improved if hazardous waste cleanups were fully funded by those who play a role in creating the problem. In addition to fees collected on waste imported from out of state, a fee of \$.10 per pound of discarded hazardous waste and a fee of \$.03 per pound of recycled hazardous waste in New Hampshire could generate \$1.7 million to \$5.8 million annually, depending on the ratio of recycled to discarded waste.

# GROUNDWATER WITHDRAWAL

A number of cities in New Hampshire rely on wells for public drinking water supplies. Those wells draw on groundwater, a resource that the state of New Hampshire holds in public trust.<sup>75</sup> Increasingly, private companies pump groundwater for use in industrial processes or to sell as bottled water. These withdrawals diminish a public resource with no compensation to the state. A fee on groundwater pumping licenses for withdrawals greater than 57,600 gallons per day would begin to address this problem.

Currently, there are 348 registered public and private users of surface and groundwater in New Hampshire.<sup>76</sup> Private users pay nothing for a 10-year pumping permit or for the water they use.<sup>77</sup> Erie Scientific Company, which extracts over 2.5 million gallons daily, Anheuser-Busch, which withdraws over 2 million gallons daily, and Monadnock Paper Mills, which extracts approximately 750,000 gallons daily, paid nothing for their permits and pay nothing for the water they use.<sup>78</sup>

Federal funds pay for DES to review site specifications, hold public hearings and accept public input, comment on the developer's plans for testing well capacity, and conduct a technical review of the permit.<sup>79</sup> DES estimates that each year it re-



views 10 permits for withdrawals greater than 57,600 gallons per day. A fee of \$10,000 per permit would generate, on average, \$100,000 annually for the General Fund and would help compensate the state for the public resource used for private benefit.

## **PURPOSE**

**Discourage pollution;  
raise general revenue**

## **ADDITIONAL FUNDS GENERATED**

**\$100,000**

# GREENHOUSE GAS EMISSIONS FROM INDUSTRY

## PURPOSE

Discourage pollution;  
raise general revenue

## ADDITIONAL FUNDS GENERATED

\$1.48 million

The burning of fossil fuels releases greenhouse gases into the atmosphere, pushing global temperatures higher and causing potentially significant disruptions to our climate. New Hampshire's ecosystems and economy will be affected by these changes as sea levels rise, as precipitation affects agricultural practices, and as warmer temperatures disrupt the displays of bright fall foliage that attract tourists. A modest fee on greenhouse gas emissions will not reduce production of these gases as much as will be necessary to protect the environment. Such a fee, however, could generate revenue for the state by targeting an undesirable activity while sending an important signal about the importance of preventing global warming.

An ideal fee system would be based on emissions of greenhouse gases. With the highest ratio of greenhouse gases to unit of energy produced, coal would be charged the most, then oil, and then natural gas. New Hampshire has already taken the first steps that would make this possible. In 1999, the Legislature created the Voluntary Greenhouse Gas Emissions Reductions Registry, which allows facilities to report reductions in their carbon dioxide, methane, and nitrous oxide emissions.<sup>80</sup> Companies can report emission reductions that they have achieved since 1991 so that if reductions become mandatory in the future, the companies will get credit for having already acted responsibly.<sup>81</sup> With this regis-

try, with a more comprehensive one being developed regionally, and with pending disclosure rules the state is establishing systems for collecting information about greenhouse gas emissions. By requiring that facilities report their emissions, the state would have the data necessary for assessing a fee.

Fee levels should differ depending on the greenhouse gas. Carbon dioxide, methane, and nitrous oxide have different potentials for contributing to global warming, as shown in Table 9. One ton of nitrous oxide causes more damage than one ton of carbon dioxide; fees should be structured accordingly. The easiest way to do this is by reporting emissions in terms of their impact if they were carbon dioxide. This then allows a rate of dollars per ton of carbon dioxide equivalent (TCDE).

Table 9 also shows New Hampshire's total greenhouse gas emissions in 1993 from stationary industrial sources, the most recent year the state compiled a detailed inventory of emissions. The state has estimated that emissions increased by 2.6 percent per year in the 1990s. Assuming that the annual growth rate remained constant past the 1990s, greenhouse gas emissions in 2003 are over 9.9 million tons of carbon dioxide equivalent.<sup>83</sup>

A fee of \$0.15 per ton of carbon dioxide equivalent emitted by stationary industrial sources would generate over \$1.4 million.

**Table 9. New Hampshire total greenhouse gas emissions from stationary industrial sources, 1993<sup>82</sup>**

Greenhouse Gas	Global Warming Potential	Gross Emissions (tons)	Gross Emissions (TCDE)
Carbon Dioxide	1	7,579,515	7,579,515
Methane	24.5	94	2,309
Nitrous Oxide	320	0.6	192
Total			7,582,016

# VEHICLE WASTE DISPOSAL\*

New Hampshire operates the Used Oil Collection program to help communities collect and dispose of motor oil. Another program gives towns the authority to collect money and operate a bigger range of vehicle waste disposal programs. Municipalities may collect an annual vehicle registration fee to pay for disposing of vehicle wastes with the least harm to the environment.

Through a vote, towns can adopt the fee structure established by the state. The fees are \$5 for heavy vehicles, \$3 for cars and light vehicles, and \$2 for all-terrain and two-wheeled vehicles.<sup>84</sup> The money can be used for collecting and disposing of used tires, motor oil, motor vehicle batteries, and other vehicle-related wastes. If a town charges the fee during registration, then it cannot assess an additional fee for motor oil brought to the solid waste facility. Any excess revenue can be used to reduce the cost of recycling and solid waste reclamation programs.<sup>85</sup>

The program confers environmental and budgetary benefits. Charging an extra disposal fee at the landfill for motor oil, tires, and batteries can discourage people from properly disposing of vehicle wastes

and increase illegal disposal methods that can pollute soil and water. Vehicle wastes present a range of threats: tires stored aboveground burn readily once lit, anti-freeze may qualify as hazardous waste, used oil contains toxic and carcinogenic contaminants, and car batteries are 50 percent lead by weight.<sup>86</sup>

By collecting money for disposal costs separate from the disposal process, the program eliminates a common barrier to proper disposal. Leftover money can subsidize other recycling programs, thereby making recycling cheaper relative to trash disposal.

Concord, Derry, Dover, Peterborough, Lancaster, and Manchester all collect vehicle waste disposal fees. Concord collects \$83,000 annually, which covers all its disposal costs.<sup>87</sup> Manchester anticipates revenues of \$280,000 in 2003 and expenses of \$214,000. Costs include disposing of seven tons of batteries, 2,480 gallons of used oil, and 78 tons of tires. The remaining \$66,000 supports other recycling programs.<sup>88</sup>

Despite the value of this program, very few communities have chosen to implement it. More towns should act to protect their environment.

## PURPOSE

**Enable stronger environmental protection**

## ADDITIONAL FUNDS GENERATED

**Varies by community**



*\* This fee and the following one have a greater impact on municipal budgets than on the state budget but are included in this report for the value of their environmental impact.*

# DEVELOPMENT IMPACT FEES

## PURPOSE

Enable stronger environmental protection

Discourage pollution; raise revenue

## ADDITIONAL FUNDS GENERATED

Varies by community

New Hampshire's population grew by 17 percent from 1980 to 1990 but the amount of developed area increased almost twice as fast.<sup>89</sup> This sprawling growth paves over open space, consumes farmland, and eliminates natural habitats. It imperils water quality and the survival of diverse species.

Low-density development has also harmed town budgets by creating the need to build more roads, schools, libraries, police departments, and fire stations. Though developed land has a higher appraised value and therefore generates more property tax revenue than does open space, it requires more public services than it pays for. Classroom space, library capacity, increased police and fire reach, and other infrastructure improvements can add up to tens of thousands of dollars per new home. Those expenses are greater than the revenue raised by development. Open space, though it pays little in taxes, requires very few services and covers its own costs. Towns must use other revenues, such as property tax from open space, farmland,

and existing homeowners, to subsidize the infrastructure necessary to support sprawling development.

In 1991, the state passed legislation allowing municipalities to charge a fee on each new development to recoup some of the infrastructure costs of servicing new development. These impact fees are intended to ensure that growth pays for itself and that current residents of a town do not have to subsidize development. Because impact fees are supposed to reflect the additional marginal cost of providing public infrastructure to serve a new development, they also provide an incentive for less sprawling development by reflecting the costs of more distant subdivisions; roads, police and fire protection, water supply, and sewer lines cost more for remote developments.

This higher cost can influence private development decisions. If outlying development is more expensive relative to infill or compact options, then some home buyers will prefer the environmentally less-damaging option. A house immediately adjacent to existing neighborhoods will require less pavement and thus create less runoff, will enable residents to drive less and thus create less air pollution, and will overall consume less open space.

Fees can be collected for water treatment and distribution facilities; waste water treatment and disposal facilities; sanitary sewers; storm water, drainage, and flood control facilities; public road systems and rights-of-way; municipal office facilities; public school facilities; public safety facilities; solid waste collection, transfer, recycling,





reprocessing, and disposal facilities; public library facilities; and public recreational facilities.<sup>90</sup> Impact fees cannot pay for operating costs.

Fifty-four New Hampshire communities have enacted local impact fee ordinances.<sup>91</sup> From 1991 to 1998, cities collected approximately \$9 million for growth-related capital improvements through such fees.<sup>92</sup> (Money collected through exaction-taxes imposed on development but less focused on providing support for infrastructure needs-is not included in this figure.) Local ordinances most commonly include fees to fund schools, roads, and recreation facilities. Few communities charge for sewer infrastructure, waste and recycling facilities, and others.<sup>93</sup> Additionally, for those categories for which fees have been established, towns have set fee rates lower than the true costs and frequently provide unwarranted exemptions. Finally, many communities fail to charge fees to non-residential developments at all even though they have an impact on roads and other facilities.<sup>94</sup>

Of 20 southern New Hampshire towns surveyed by the Southern New Hampshire Planning Commission, none make full use of impact fees. The majority collect fees for schools and roughly half collect fees for roads. Of the specific categories of expenses surveyed, only three communities-Jaffrey, Litchfield, and Londonderry-require at least half.<sup>95</sup> This incomplete use of impact fees means that sprawling development does not pay its full costs and that its price is artificially low. The price disparity between environmentally-sensitive and environmentally-damaging development is not as great as it could be and thus sprawling development is not adequately discouraged.

Fees collected for each type of service vary widely. For fire service, Dorchester charges \$36 per new single-family home

**Table 10. Of 20 surveyed communities, the number that collect various impact fees**

Types of Impact Fees	Number of towns collecting
Roads	9
Schools	14
Recreation	6
Library	4
Police	3
Fire	6
Solid Waste	2
Water Supply	2
Sewer	2

while Newfields charges \$1,000. Pembroke charges \$1,128.74 for school expenses. At the other extreme, Sandown charges \$3,304 and Londonderry uses a sliding scale based on the number of bedrooms in a home.<sup>96</sup> The school fee for a two bedroom, single family home is \$4,031, a three bedroom home is \$6,134, and a four bedroom home is \$7,984.<sup>97</sup>

The collected fees are not enough to pay for an entire new school, which can easily cost \$10 million, or for a new fire station. Rather, they pay for the portion of the new facility made necessary by increases in population. The existing tax base pays for the remainder of the costs.

All communities should assess impact fees to reduce the burden on municipal budgets. Towns should set the fees high enough to cover new development's true share of costs. The fees are most successful at controlling sprawling development when rates are structured to fully reflect the cost difference of serving a development adjacent to existing communities versus subdivisions several miles out of town. The state could help by extending the deadline by which collected impact fees have to be spent, so that small communities have more years over which to collect money to pay for large infrastructure projects.

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