Citizens who participate in attempts to stem the tide of environmental degradation in modern Philadelphia are part of a tradition which dates from the very beginning of urban life in William Penn's "greene country town which will never be burnt, and always be wholesome." During the era of the American Revolution, when the city reached a peak of manufacturing and commercial growth, an environmental crisis of substantial proportions pricked at the consciences of Philadelphians. Compared with the problems of air, water, visual, and noise pollution which plague Philadelphia in the 1970's, the difficulties of 200 years ago were small; but to citizens of the early city, whose scale of perception and whose pollution-tolerance were lower than ours, the environmental concerns were great.

The most persistent sources of complaint arose from the condition and use of Philadelphia's streets and alleys. In 1769, for example, a French visitor criticised the location of the Loganian Library, because it was "in the very edge of the Road So that in Summer unless the windows & doors (for they are all fronting the Streets)
should be Kept Shut up, the dust make it a most uncomfortable Situation & at the Same time injure the books greatly." Streets which billowed clouds of dust in dry seasons were mud-clogged when it rained. Benjamin Franklin recalled in his Autobiography that “in wet Weather the Wheels of heavy Carriages plough’d them into a Quagmire. . . .” Seldom were the city’s roadways either useful or pleasant for the people who depended upon them.

The eyes and ears and noses of Philadelphians were assaulted everywhere in the city. “Thundering of Coaches, Chariots, Chaises, Waggons, Drays and the Whole Fraternity of Noise” threatened the safety and sensibilities of the people. From “old & shabby” buildings jutted out all manner of unsightly signs, shingles, and other obstructions which were an ugly nuisance to passers-by. If one could survive or tolerate the cacophony and disarray, he still had to contend with trash, rubbish, and sewage in the streets. Artisans commonly used public roads to dispose of their solid and liquid wastes; some contaminated whole neighborhoods by emptying “foul and stinking Liquors” into the streets, while others spoiled drinking water by emptying wastes into deep wells which reached the water table. Foot passage along the streets gradually became more dangerous and unpleasant. The air Philadelphians breathed and the water they drank was being seriously contaminated.

Streets which received the most use were naturally the most deteriorated. The broad avenues containing market “shambles” in their center, for example, were particularly bad. While everyone recognized the desirability of having open-air markets, where country farmers and artisans might vend wares brought to the city, the markets created significant health, comfort, and safety problems for the

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5 Solomon Drowne to William Drowne, Nov. 9, 1774, PMHB, LXVIII (1924), 237.
6 Solomon Drowne to Sally Drowne, Dec. 2, 1774, ibid., 238; Pennsylvania Gazette, Nov. 30, 1769.
8 Pennsylvania Gazette, Mar. 10, 1763; Pennsylvania Journal, Mar. 20, 1767; By the Mayor . . . and the Commissioners for Paving and Cleansing the Streets, &c. (Philadelphia, 1765).
9 Ibid.
local residents. When the Common Council announced in 1773 its intention to extend the existing shambles in Market Street, the plan was opposed by the neighbors, who claimed it would "greatly incommode" them. The citizens first attempted a law suit "to try the right of the Corporation to erect those Stalls," and when that failed they purloined the workmen's bricks and mortar, and pulled down their lime house.

Philadelphia's principal water course, Dock Creek, also posed some important environmental problems for the city. Originally a marshy stream, it had been channeled by a brickwork, and was used to carry off waste and sewage; as the city expanded westward, it was also used to convey flat-bottomed cargo barges. When Philadelphia was young, the use of the Dock as an open sewer seemed harmless enough, but by the 1760's it bore inevitable results. In 1763, some inhabitants alleged the creek had become "in great Measure useless" because it was being used as "a Receptacle for the Carcases of dead Dogs, and other Carrion, and Filth of various kinds, which laying exposed to the Sun and Air putrify and become extremely offensive and injurious to the Health of the Inhabitants."

Efforts made to improve the channel and clean the course failed, for five years later another petitioner to the Board of Aldermen claimed the Dock "is become almost useless for want of being cleaned out, and that some persons in the neighborhood have lately made some Reparations which are injurious to the Navigation of the Dock..." A year later another petition spoke of "the great Encrease of Buildings of late Years, together with the necessary Regulation of the streets," which it was alleged had rendered the

12 The major rivers of the colony, the Delaware, Schuylkill, and Susquehanna, were also matters of concern, but here the interest was primarily economic, not environmental.
13 Harrold E. Gillingham, "The Bridge Over the Dock in Walnut Street," _PMHB_, LVIII (1934), 260, 268; _Pennsylvania Archives_, Eighth Series (Harrisburg, 1935), VI, 5384–5385; Watson, _Annals_, I, 336–341; To the Honorable Representatives... the Petition... to Extend the Arch over the Common Sewer (Philadelphia, 1784).
14 _Pennsylvania Archives_, Eighth Series, VI, 5384–5385.
15 _Minutes of the Common Council_, 743.
Dock inadequate as a sewer, especially in times of heavy rains.¹⁶ And as if all this were not enough, in 1770 the Water Street drawbridge over the Creek crumbled at the foundations, exposing the inhabitants to "the great danger and Inconvenience" of its contaminated waters.¹⁷

Philadelphians did not stand by idly as their environment deteriorated. People spent a great deal of time out doors, so it mattered what they heard, smelled, saw, and experienced in their streets and alleys.¹⁸ One of the first to take action was the ubiquitous Benjamin Franklin. In the 1750's, he began "talking and writing on the Subject" of eliminating street dust and mud by paving the major thoroughfares and employing a scavenger to carry off rubbish and waste.¹⁹ In 1758, some citizens petitioned the Assembly for the inauguration of a street paving program. The petitioners were invited to write their own bill and present it to the legislature, but they failed to make a proposal.²⁰ Progress, for the time, was slow and piecemeal; some center strips were bricked over, but improvements were almost wholly dependent on the private efforts of citizens whose property abutted roadways or the Dock.²¹ It was in 1762 that Philadelphians' environmental concern coalesced. From that year until the end of the decade, the city carefully refined and improved its methods of conserving and improving the environment.

The Assembly took the initiative when it enacted the colony's first street paving legislation in March, 1762.²² A lottery and a tax were authorized to pay the expenses of paving, and commissioners were appointed to oversee the project and to maintain newly paved streets. Property owners who had paved sections of the roads were reimbursed, and those with "Banks of Earth or Rubbish before their Houses or Lots" were required to remove them.²³

¹⁶ Pennsylvania Archives, Eighth Series, VII, 6308.
¹⁷ Minutes of the Common Council, 746.
¹⁹ Autobiography of Benjamin Franklin, 202-203.
²⁰ Pennsylvania Archives, Eighth Series, VI, 4725, 4743.
²¹ Bridenbaugh, Cities in Revolt, 29, 31-32; Pennsylvania Gazette, May 6, 1762; To the Honorable Representatives . . . the Petition . . . to Extend the Arch over the Common Sewer (Philadelphia, 1784).
²² Pennsylvania Archives, Eighth Series, VI, 5294, 5325, 5327, 5329.
²³ Pennsylvania Gazette, May 6, 1762.
The street paving project touched a sensitive nerve, for it was less than a year later that a larger environmental concern was voiced. Two petitions to the Assembly alleged that the Dock was not only commercially useless, but offensive and injurious to the people of the city. The object was not to stop use of the Dock as a sewer, but to make it more effective by improving the channeling and cleaning it out; the only available alternative to a common open sewer was the use of deep disposal wells, many of which were already damaging water supplies. While on the subject of improving bad conditions, the petitioners also condemned the practice of leaving the carcasses of dead horses on the common, a custom “not only extremely offensive to the Passengers on the Road, but [which] also tends to infect the Air, and produce Disease.”

Meanwhile, the street paving project had proved so successful, but so expensive, that the Commissioners were petitioning for more funds. They suggested to the Assembly that going forward with the project “will be most agreeable to the Public... because the Usefulness of the Pavements already made depends so much thereon, and it is but just the Advantages of the Act should be extended as soon as may be to all Parts of the City inasmuch as every Inhabitant contributes immediately to the Expense thereof....” The commissioners also suggested that the law more strictly enjoin cooperation of the citizens, by requiring them to cart away “Heaps of Rubbish and Earth, which have from Time to Time been thrown into the public Cart-way...,” and by prohibiting heavy-laden wagons with narrow wheels which would damage new pavements. Finally, they suggested better enforcement of regulations requiring inhabitants to keep walkways paved and prohibiting structural obstructions which extended into the streets.

The Assembly responded immediately to the expressed concerns of the citizens and their public officers in Philadelphia. Using the occasion of renewal of the 1762 paving legislation, it enacted Philadelphia’s first comprehensive environmental law. The act began by condemning the polluting practices of some of the city’s commercial enterprises, particularly distillers, butchers, soap-boilers and tallow chandlers, who commonly discharged “large quantities” of “nause-
ous” substances into the streets, and who sometimes stored “stale, putrid or stinking fat, grease, or other matter.” The test of an offense was to be simply whether it should “annoy or offend any neighbor,” and the fine was stiff. The Act further provided fines for citizens who left dead horses “or other dead carcase, of cattle, sheep, hog, or dog, or any such carcase, carrion or filth, without burying the same a sufficient depth in the ground, on any part of the commons . . . or on or near any of the streets.” The Dock, too, was to be protected from similar polluting. The “encroachments” of cellar doors, bulks, steps, porches, and “jut-windows” onto the streets were forbidden, and spouts and gutters which would drench passers-by in rainy weather were prohibited. Provisions were also made to continue street paving and to arrange for the Dock to be “cleansed and properly walled” at public expense. Two years later the Assembly passed another law requiring artisan wheelwrights to manufacture only wide-rimmed wagon wheels, so that pavements would not be damaged.

This legislation remained in effect until 1769, and it appears to have been successful so far as the streets were concerned. A mayoral proclamation announced the employment of a scavenger and “warned and cautioned” artisans that they could “expect to be strictly prosecuted and fined” for failure to use his services. Every citizen was asked “not only to avoid offending in the Premises himself but . . . [to] discountenance the same in others.” The Dock, however, remained a problem. In January, 1769, Philadelphians testified that the conditions of the Creek rendered adjacent streets almost impassible. They contended that “many People have suffered great Loss, while others have been in much Danger therefrom, which has greatly depreciated the Estates of many of the Petitioners in that Quarter of the City; that this Grievance must encrease as the vacant Parts of the City, from which Water is conveyed to the said Sewer, become improved and built upon.”

20 Pennsylvania Gazette, Mar. 10, 1763; Pennsylvania Archives, Eighth Series, VI, 5406.
21 Ibid., 5397.
22 Pennsylvania Gazette, Mar. 6, 1766.
23 City of Philadelphia, By the Mayor . . . and the Commissioners for Paving and Cleansing the Streets, Ec. (Philadelphia, 1765).
24 Pennsylvania Archives, Eighth Series, VII, 6308.
Relief on the subject of the sewer had been sought the previous year from the city's corporate government, but it had lacked both the will and the funds to make the necessary improvements in the water course. Hoping to meet this complaint, as well as continue the good work begun in the 1763 Act, the Assembly drafted a new bill for "regulating, pitching, paving and cleansing" the streets, for "regulating, making and amending the water courses, and common sewers," and for raising money to fund improvements.

The 1769 law reiterated all the provisions of the act passed in 1763, and strengthened its language and provisions. Persons who would "wilfully stop up, or obstruct the passage of waters of any of the common sewers" were to be fined. Property owners along the streets were required to "rake and sweep into the cart-way the dirt, soil, and other filth" on the walkways at least once a week, so that it might be removed by the scavenger. The regulations against polluting artisans were broadened to include those who would "cast or lay" such things as "shavings, ashes, dung, or other filth or annoyance"; manufacturers were to employ the scavenger, at their own expense, to carry off their wastes (waste "incident to common house keeping" was removed free of charge). Moving carriages and wagons were prohibited from littering in the city. In addition to the structural obstructions, such as porches and bulks, forbidden in the 1763 legislation, the new act also enjoined businessmen from hanging shingles and signs which extended into the streets (excepting tavern keepers).

By the time they reached the decade of the 1770's, Philadelphians were experienced and earnest in the matter of environmental conservation. The 1769 legislation was carefully drawn, and it spoke forcefully to the major environmental concerns of the urban community. And yet, as modern environmentalists have become acutely aware, enactment of legislation is only half the battle. An effective environmental campaign requires, in addition, both citizen support

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32 Pennsylvania Archives, Eighth Series, VII, 6298.
and legal prosecution. The city's population was expanding greatly; tax assessments were barely enough to cover repair and maintenance of existing pavement, and were insufficient to permit extension of paved surfaces. Improvements in the Dock had been sporadic, haphazard, and often taken at the initiative of local inhabitants. But by 1770, the citizens had the bit in their teeth and were determined to make the laws work. They spoke out against abuses and encouraged full implementation of the law. William Goddard, publisher of the Pennsylvania Chronicle, reprinted the 1769 Act for the perusal of his customers, and he willingly published their commentaries on the activities of the city's street commissioners.

A Philadelphian who styled himself "Tom Trudge" was one of the first to speak publicly. The street commissioners, it seems, had chosen to pave first the streets "hallowed with the residence of the gentry," and ignore the parts of the city inhabited by middling and poor people: "Could it be believed, if it were not notoriously known to be a fact, that in a city, famous for the lenity of its government, and public spirit of its situation, such poor fellows as I, who sup on a cup of skim milk, &c. have a parcel of half naked children about our doors, whose lean kitchens rarely produce any refuse, that wont conveniently mix with the manure of our cow, whose wives must, at many seasons of the Year, wade to the knees in carrying a loaf of bread to bake, and near whose penurious doors the dung-cart never comes, nor the sound of the paver will be heard for many ages?"

The year was 1769, and revolutionary forces were beginning to well up among the traditionally forgotten peoples of the urban community: if the environment were to be cleansed and preserved, the lesser sorts insisted that it be done equitably and fairly. A tax collected from everyone but spent only for the benefit of the rich was considered oppressive. "Tom Trudge" was not alone in this opinion. "A Citizen" repeated the accusation, claiming he had measured

34 Ibid., 5882-5883, 609c.
35 For example, in 1765, property owners along the Dock, evidently preferring a market place to a sewer adjoining their lots, undertook by private subscription a project to fill in part of the Creek, and build a market shambles over the fill. Ibid., 5714. See also, To the Honorable Representatives . . . the Petition . . . to Extend the Arch over the Common Sewer (Philadelphia, 1784).
37 Ibid.
71,534 yards of paving in the "upper" part of the city, as against 32,568 in the "lower." Another newspaper scribbler replied that the uptown roads (i.e., the streets north of Chestnut) had to be paved first because of the heavy traffic on them from farmers coming to market. The controversy was never resolved, but this is less important than the fact that it revealed an aroused public pressure related to environmental improvement.

Philadelphians nudged the street commissioners and the commissioners, for their part, attempted to execute the law effectively. Aside from defending their street paving priorities, they also implemented other aspects of the Act. In the autumn of 1769, for example, they publicly reminded businessmen of the provisions forbidding shops to carry signs which hung into the streets.

We do not have any precise accounting of the success or failure of the commissioners and the citizenry to improve the environment of the city, but scattered impressions left by visitors to the city indicate they met with some success. In 1773, Christopher Marshall praised the "great Improvements" in the city during recent years, including "a fresh addition to our Spacious Market & Shambles, so that by report it out does any in America, for beauty and Spaciousness." A few years later a French visitor noted that the streets were still not well paved (by European standards), "but the sidewalks are so well made that one walks on them as easily as in one's own room, so much attention is given to their upkeep." A legislative Act in 1779 claimed the decade-old law had been effective, especially insofar as it had secured streets "clear of filth and rubbish," which "greatly contributed to the conveniency, as well as to the health of the inhabitants." To keep the law alive in times of inflation, its fines were increased eight-fold.

40 Pennsylvania Gazette, Nov. 30, 1769.
Philadelphians' success in controlling the polluting by-products of its phenomenal economic growth began to dwindle, however, by the 1780's. Quite aside from the strains put on the city's economic resources, the Revolution had upset traditional social patterns in such a way that the city lost the sense of self-control which had underpinned the legislation of the 1760's. By the end of the war in 1783, the urban environment had once again degenerated. A citizen complained, "Dead dogs, cats, fowls, and the offals of the market, are among the cleanest articles to be found in [the streets]. Dead animals—horses and cows—are left to putrify on vacant lots."44

The city's temporary success in cleaning up the streets was never matched by success in dealing with Dock Creek. The water course had always been something of an enigma because legal responsibility for it was never firmly determined.45 After passage of the 1769 Act, some of the routine maintenance of the Dock was carried out by the street commissioners, but it was an uphill battle. Legal jurisdiction was sufficiently in question that authorities found it difficult to control the inhabitants' use and abuse of the course. Moreover, the real problem lay in the fact that it was an open sewer, and as such posed continuing and growing health, safety, and environmental problems as the city's commercial and residential communities burgeoned—problems which could not possibly be met so long as the sewer remained open. In 1783, a citizen complained that the Creek "exposed a surface to exhalation of the most putrifying matters," and was a source of disease.46 Another petition complained of the "Stench of Mud and putrifying Filth there exposed . . . [which had] rendered it a grievous Nuisance, offensive to the Senses and dangerous and injurious to the Health of neighboring Inhabitants."47 As the tide came in, patches of "green mud" floated up the course. In 1784, the Assembly obliged the petitioners by enacting legislation to enclose the sewer by constructing an archway over the channel and by building a market place over the fill.48

44 Pennsylvania Gazette, Aug. 27, 1783.
45 Minutes of the Common Council, 728, 747-748.
46 Pennsylvania Gazette, Aug. 27, 1783.
47 To the Honorable Representatives . . . the Petition . . . to Extend the Arch over the Common Sewer (Philadelphia, 1784).
48 Watson, Annals, I, 342, 347.
The size and complexity of eighteenth-century Philadelphia differentiate it so much from the modern city that the historian would be truly stretching credulity to suggest that the environmental campaign of the 1760's bears any "lessons." Except, perhaps, one: it is very clear that whatever temporary success Philadelphians of the Revolutionary era enjoyed in their efforts to make their city clean and pleasant and healthy depended intimately on broad-based community support. Both the origin and implementation of environmental legislation was tied directly to the willingness of the citizenry to make forceful and repeated demands for a better environment.

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