

PATTERNS OF PUBLIC SUPPORT FOR PENNSYLVANIA'S "GROWING GREENER" PROGRAM

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ABSTRACT: *In December 1999 Pennsylvania enacted the Environmental Stewardship and Watershed Protection Act, more commonly known as "Growing Greener". The Growing Greener program provided state funding for numerous projects aimed at improving the state's environmental condition by restoring natural resources and preserving open space. In May 2005 voters were asked to approve a bond initiative dedicating future funding for Growing Greener. Results of this vote may be seen as an indicator of support for public environmental programs in the state. The large 60.5% majority who voted in favor suggests that residents of Pennsylvania strongly approve of such activities. However, support for the bill varied considerably, with overwhelming support in the south and east, and little support in the central and northern regions. Geographic patterns of public support can be linked to patterns of population growth and political affiliation. Moreover, the patterns of how previous Growing Greener funds were distributed and used across the state indicates that public support for Growing Greener is also related to the visibility of environmental projects.*

The Commonwealth of Pennsylvania faces a number of economic and environmental challenges. Recent national studies have ranked the state near the bottom in terms of population growth and economic development (Brookings Institution, 2003; U.S. Census, 2000). At the same time the state has some of the highest rates of land developed, development rate over the past five years, and development per capita (Brookings Institution, 2003). Pennsylvania's long history of resource exploitation and industrialization has left a legacy of degraded streams and abandoned mines (Growing Greener, 2005). A backlog of nearly 2,000 farms is awaiting easements to preserve open space (PDA, 2005). The challenges of poor environmental quality, development threats, and economic stagnation have led to the conflation of these ideas by recent state administrations. In the late 1990s a new directive was given to invest state funds into environmental projects to stimulate economic growth by "growing greener".

GROWING GREENER

In December 1999 Pennsylvania enacted the Environmental Stewardship and Watershed Protection Act which came to be known as Growing Greener. This Act provided for \$625 million to be spent on environmental projects over a five-year period. The goals of the Act were broad. They included preservation of open space, purchase of farmland easements, maintenance of State Parks, watershed restoration, clean-up of abandoned mines,

capping old wells, and improvement of urban water systems. Growing Greener funds were distributed through four state agencies: the Department of Conservation and Natural Resources (DCNR), the Department of Environmental Protection (DEP), the Department of Agriculture (PDA), and the Pennsylvania Infrastructure Investment Authority (PIIA). Each agency chose to utilize its share of the funding in different ways. For example DCNR dedicated the majority of its share of the money to public open space and recreation projects. DCNR received a total of \$24.4 million in the first six months, and \$32.5 million per year thereafter. Over \$125 million of this amount was spent on relieving the backlog of maintenance programs at State Parks. A further \$27 million was used as matching grants to help fund land trusts, heritage parks, and rails-to-trails initiatives (DCNR, 2005). DCNR has also been involved in an approach to land development that requires subdivision developers to first consider setting aside conservation areas before siting house lots (Arendt, 1998). DEP used its share of Growing Greener funds to begin a major effort at watershed restoration. DEP made funds available through competitive grants to achieve a variety of watershed goals. These included reducing agricultural runoff, reducing point-source pollution from mine and well sites, restoring riparian buffers, and creating watershed planning groups. The Department of Agriculture's share of funds has been used to preserve farmland, while PIAA money has gone to upgraded water and sewage systems. In the five years that followed the passage of Growing Greener, a significant amount of state money has been applied

to environmental projects across the state. Long-standing environmental problems have begun to be addressed at a number of scales and through a wide variety of approaches. Significant progress toward an environmentally-conscious method of development has been made.

Growing Greener funds continue to be available, though budget shortfalls in the state government have meant that the levels of funding have been compromised. In recent years the total available money has declined. In 2005 Growing Greener will only receive 79% of its funding and levels may be as low as 65% in 2006 (Growing Greener 2005). This situation has led many to be concerned about the long-term sustainability of the program unless a dedicated source of funds can be found. In 2005 a bond initiative was placed on the ballot which would provide \$625 million additional funds to the program. The question read "Do you favor authorizing the Commonwealth to borrow up to \$625,000,000, for the maintenance and protection of the environment, open space and farmland preservation, watershed protection, abandoned mine reclamation, acid mine drainage remediation and other environmental initiatives?" Taxpayers were asked to support the proposal to allow the state to sell these bonds to provide five more years of dedicated funding. In May 2005 the initiative went up for a vote. Because the election took place in an off-year, voter turnout was low. Less than 20% of registered voters made it to the polls. Nevertheless, the bond initiative passed with strong support. Over 725,000 state residents (60.6%) voted in favor of the measure, while 470,000 (39.4%) voted against it. Clearly Pennsylvania's residents were in favor of environmental initiatives in general and the Growing Greener program specifically. An overwhelming majority were willing to accept state debt payments in order to continue the young program. However, the geographic pattern of support was not evenly distributed. This political geography may be representative of public patterns of support for environmental programs across the state and is undoubtedly influenced by other geographic patterns. An analysis of contributing factors makes up the majority of the discussion that follows below.

PATTERNS OF GROWING GREENER SUPPORT

The spatial pattern of support for the Growing Greener bond initiative is shown in Figure 1. The measure passed in 47 of the state's 67

counties, again indicating widespread support. In most of these counties, the "yes" vote received between 50-60% of the vote. There were some portions of the state that supported the program at even higher rates. In two counties in the Pittsburgh area, Centre County (home to State College), and a handful of counties in the northeastern part of the state, support ranged from 60-70%. Highest levels of support were seen in the populous counties of Philadelphia and its suburbs, and in the Pocono Mountain region of the Northeast. Here, the program garnered support from more than 75% of the voters. Conversely, there were areas of the state that did not support the initiative. A number of counties in the southern Ridge and Valley region voted against the ballot measure. The weakest area of support was in the interior Northwest. Excluding Erie County, the rest of the northwestern region voted in the negative, and in a few counties support did not even reach 40%. Support for state involvement in environmental development clearly breaks down into a distinct geography of support in the East and more skepticism in the North and West.

In order to explain the geographic patterns of support, these voting patterns are compared to patterns of political affiliation, development pressures, and the use of prior Growing Greener funds below. For each factor, representative statistics are collected at the county level and compared to county vote totals through simple correlations. Significant correlations are assumed to be indicative of strong relationships between those factors across the state and public support for the Growing Greener program.

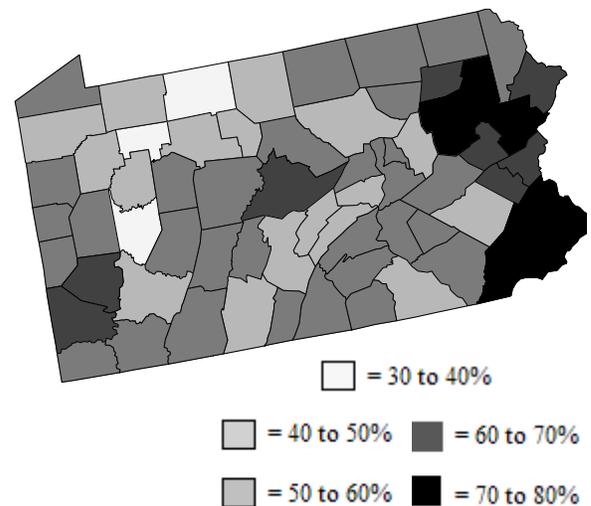


Figure 1. Percentage of voters who voted in favor of bond initiative to fund the Growing Greener program in May 2005.

Political Affiliation

There are a number of reasons why the state's vote may have displayed such spatial variation. Most obviously the patterns may reflect underlying political patterns as indicated by party support. In fact there is a significant positive correlation ($r=0.31$) between voting support and the percentage of registered Democratic voters in each county. Counties with a high percentage of Republican voters, such as the south-central and northern regions, also tended to be areas where the initiative was not well supported (Figure 2). A tendency for Republican voters to oppose large governmental programs, and especially to be against debt financing, is likely to explain these patterns. This opposition may be especially strong in areas where larger portions of land are already seen to be under state and national control through National Forests, State Parks, etc. Political affiliation alone cannot explain the entire pattern though. Areas with a high concentration of Democratic voters, such as the Southwest, did not support the measure in large numbers. Most obviously, the regions of strongest voter support occurred in areas of the Southeast and Northeast where Republican voters are strongly in the majority. Clearly there is more at work here than simple party politics. In fact, though the current state administration is Democratic, the original Growing Greener program was enacted under Republican leadership.

Development Pressures

A second factor influencing patterns of support for Growing Greener is, no doubt, the presence of development pressures on different portions of the state. Figure 3 shows the change in population between 1990 and 2000 (U.S. Census, 2000). Despite low state population growth, extremely rapid population increases are taking place in the East. The Philadelphia suburbs grew between 10 and 20% during the decade. Even higher growth rates have been experienced in the Northeast. In ten years Monroe County grew 45%, and Pike County grew an incredible 66% as the New York suburbs spilled across the state line. These high rates of population growth have an obvious imprint on the landscape. Suburban sprawl, loss of green space, traffic congestion, etc. have become frequently debated issues in these parts of Pennsylvania. Environmental issues are at the forefront of many people's minds, and in the face of such rapid growth, the majority favor ways of curtailing rampant land-use change. Initiatives such as Growing Greener appeal to voters' sense of community preservation,

regardless of political affiliation. On the other hand, regions in the western parts of the state have experienced very slow growth. In fact a large portion of the northwestern and west-central areas have actually lost population. As people leave the region, priorities in those regions are not the same. There is not the same sense of land-use loss that is present in the East. Consequently the same sense of urgency may not be present in these areas. Overall, recent population growth by county is significantly correlated with support for Growing Greener funding ($r=0.25$).

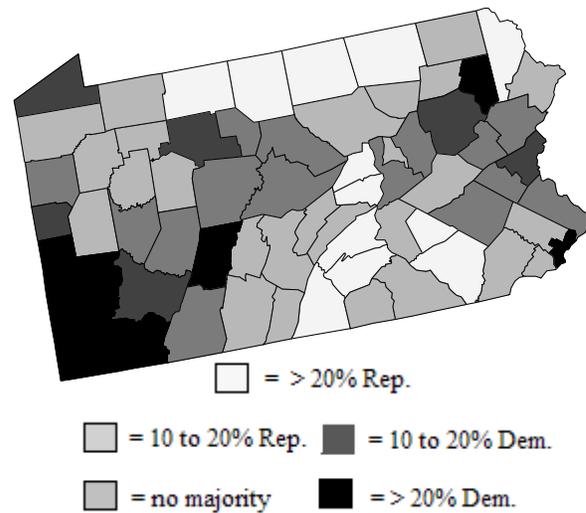


Figure 2. Political party membership of registered voters in 2005.

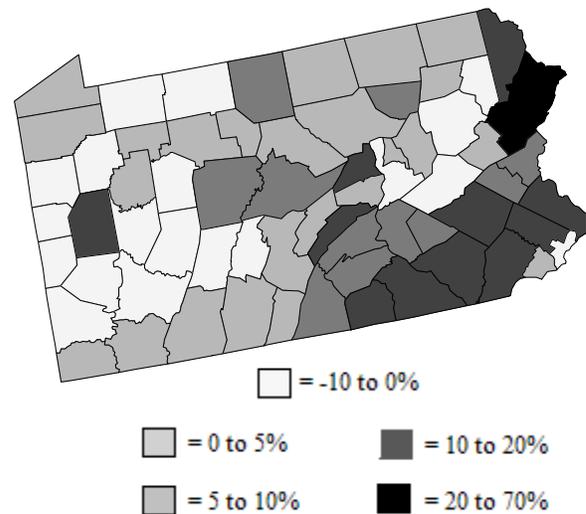


Figure 3. Percentage population growth from 1990 to 2000.

Use of Prior Funds

Finally, the use of previous Growing Greener funds may have an impact on the patterns of support. In an off-election year voters needed a reason to turn out at the polls. Knowledge of the Growing Greener program and a familiarity with its purposes and history most likely influenced the pattern of support. Past Growing Greener funds have not been distributed evenly across the state. Many of the funds were issued by competitive grants awarded regardless of geography. The southeastern and south-central regions of the state have benefited the most from Growing Greener funds, receiving \$90 million and \$88 million respectively. A large amount of money, \$67 million, has also gone into the Southwest. Much less money has found its way into the less populated portions of Pennsylvania. The northern regions have received approximately half of the total funds that the southern regions have received (Growing Greener, 2005). As more funds have been spent in high population-density areas like the Philadelphia region, the impact and success of the program has become more apparent to the common voter. Conversely, areas which have received lesser funding may not believe that the state should accept more debt to fund a program that they do not see as positively affecting their region.

Not only is the total Growing Greener spending important in explaining patterns of support, but the way in which those funds were utilized is also critical to understanding their influence. Figure 4 shows the proportion of Growing Greener funds that have been used in each category for the major regions of the state. The uses of funds are divided into the major categories of purposes laid out by the original act: agricultural land preservation, green space preservation, watershed restoration, clean up of mines and capping of wells, and town planning. In most regions the first three categories have received the bulk of the funding. In the southeastern portions of Pennsylvania, open space and farmland preservation have received nearly two-thirds of Growing Greener dollars. Funding distributed through the Department of Agriculture has been used to set aside farmland in danger of falling to suburban development. For example, Chester, Montgomery, and Bucks counties have each received between six and seven million dollars to purchase agricultural easements. One million dollars has gone to neighborhood parks revitalization, and nearly three-quarters of a million dollars was given to the Fairmont Park Commission in the city of Philadelphia (Growing Greener, 2005). These projects have an immediately visible effect on the landscape. Open space funding through DCNR has

improved State Park facilities used by millions of visitors each year (Henderson, 2003). A half million dollars has gone to the Brandywine Battlefield Park in Chester County, and nearly one million dollars has gone to such groups as the National Lands Trust and conservancy programs in the Philadelphia suburbs. In areas of rapid population growth, these types of projects are very visible to the public. When asked to decide whether the Growing Greener program is worthy of further support, residents of the Southeast are likely to be familiar with its impact.

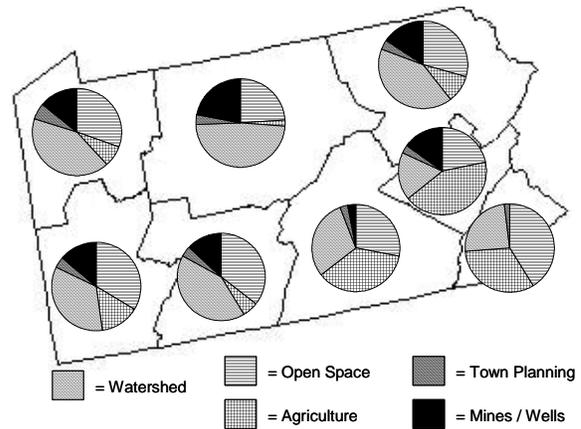


Figure 4. Percentage of Growing Greener grant funding that has been used for watershed restoration, open space preservation, agricultural land preservation, town planning, and clean-up of mines and capping of wells.

In the north-central and northwestern regions as little as 25% of Growing Greener funds have been spent on these open space functions. Instead, the majority of funds have gone into point-source pollution reduction, by capping old wells and cleaning runoff from abandoned mines, and for watershed restoration. Large multi-million dollar grants have been awarded to such programs as abandoned mine reclamation and acid mine drainage reduction. While these projects address admirable and necessary goals, their effects are less likely to impact the general public as they go about their everyday activities. In the Southeast, residents drive past preserved farms, go apple-picking, take weekend hikes in State Parks, etc. In the Northwest it is less likely that residents will notice reduced runoff from an impaired area, or improved water quality of local creeks. The benefits of Growing Greener are not as obvious in the Northwest and consequently are less likely to influence people to support the program.

In most regions the highest proportion of Growing Greener funding has been distributed through DEP in order to restore watersheds. A searchable database of over 2,000 DEP grants by county is available on line (DEP, 2005). An analysis of these grants reveals more interesting patterns. The purpose of each grant can be classified into one of five categories: reduction of agricultural runoff, restoration of stream flow and channel morphology, water quality improvement, habitat restoration and riparian buffers, and education and outreach. The latter category includes grants for such projects as the establishment of local watershed associations, printing and distributing pamphlets, creating local learning centers, and the involvement of school groups in watershed studies. These education and outreach grants rarely involve large sums, but represent ways in which the general public has been made much more aware of, and feel connected to, the Growing Greener program. A representative sample of DEP grants is shown in Table 1. In the selected counties in northwestern Pennsylvania, almost two-thirds of the grants and three-quarters of the money has been used to improve water quality. For example, two separate million dollar grants were awarded to groups in Elk County to restore water quality by reclaiming abandoned mine land and installing passive treatment systems. In this part of the state the long history of environmental degradation associated with mining has necessitated this kind of approach. These projects are extremely valuable to the region's environmental health. Yet, of the twenty-eight grants totaling over \$6 million dollars in these three counties, only one \$7,000 grant was used for education and outreach. In Chester County in the Philadelphia suburbs nearly one-quarter of the grants were used for education and outreach. Though these grants only accounted for 12% of the total funds, the number of projects publicizes the utility of the Growing Greener program. A map of the percentage of DEP grants used for education and outreach statewide is shown in Figure 5. A familiar pattern is apparent. In eastern Pennsylvania, particularly in areas of the Philadelphia suburbs and the Poconos, more than 20% of DEP grants went for education and outreach. In the interior Northwest few if any of the grants were used for these purposes. This lack of visibility and connection to the public occurs in the same counties where support for the funding initiative was lowest.

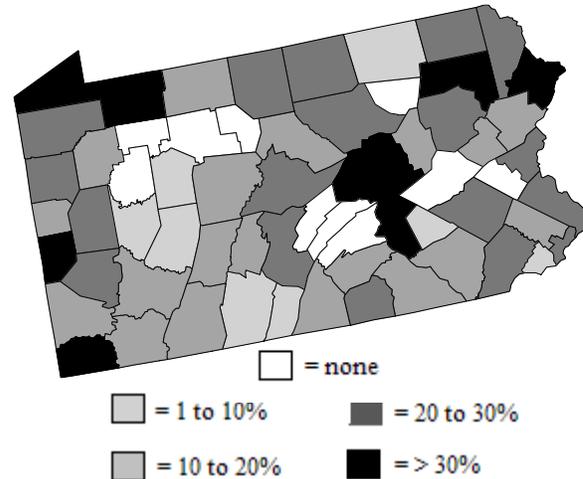


Figure 5. Percentage of DEP Growing Greener grants that were used for education and outreach projects.

SUMMARY AND OUTLOOK

Pennsylvania's history of development and environmental degradation has placed considerable stress on the state's environment. The original Growing Greener program was created to mobilize large amounts of state funding to environmental restoration which will hopefully lead to economic development. The Growing Greener program has the support of a large majority of the state's residents. Nearly two-thirds of the voters gave their approval to a bond initiative that will provide additional dedicated funds to the program. However, support within the state was not uniform. Residents in the Philadelphia suburbs and in Northeastern Pennsylvania voted strongly in favor of the initiative. In these regions, recent population growth has made environmental preservation a prominent issue. A history of benefits from past Growing Greener projects, particularly ones with visible public impact, has created an environment of bipartisan support for environmental programs. Conversely, in the northwestern portions of the state, lower funding levels, past projects that have been less visible, and a stable or declining population have not given the local population sufficient reason to vote to spend state funds for these programs.

It remains to be seen how the new Growing Greener bond funds will be spent. Some politicians are arguing that the funding should be distributed evenly through the counties to ensure a more equitable pattern of spending. Others argue that

Patterns of Public Support for PA's "Growing Greener" Campaign

Table 1. Total number (%) of DEP grants and their total amount (%) by major categories for three representative counties in northwestern Pennsylvania and one county in the Southeast.

	Cameron, Clarion, Elk Counties		Chester County	
	Number of Grants	Total \$ Value	Number of Grants	Total \$ Value
Agricultural Runoff	1 (4%)	131,000 (2%)	6 (15%)	68,000 (8%)
Stream Flow	6 (21%)	342,000 (6%)	14 (35%)	86,000 (24%)
Water Quality	18 (64%)	4,355,000 (70%)	5 (13%)	501,000 (49%)
Buffers / Habitat	2 (7%)	1,359,000 (22%)	6 (15%)	56,000 (7%)
Education / Outreach	1 (4%)	7,000 (0%)	9 (23%)	70,000 (12%)

funds should be more targeted to specific projects that show the best potential for success. Some of the funding should be used to assess the success of past projects. In a recent editorial David D. Hart, director of the Patrick Center of Environmental Research at the Academy of Natural Sciences, argues that current restoration efforts are as much art as science and that we are still learning which practices work best (Hart, 2005). Over \$600 million has been spent on environmental improvement in the last five years, but little has been done to discover which projects have been most effective. A national assessment indicates that only 10% of past river restoration efforts are monitored (Hart, 2005). Based on the results of this paper, one might also conclude that, in order to ensure continued public support for environmental initiatives in Pennsylvania, at least a portion of the funds should be dedicated to education and outreach and to the types of open space projects that raise the visibility of environmental issues to the state's residents.

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