

# Investing Effectively

## Investing in Infrastructure and Using Tax Dollars Wisely

### The State Role in Infrastructure Provision

The location of and investment in infrastructure across Delaware is often based in response to localized decisions. Due to the state's large role in funding infrastructure projects, these local decisions often translate into impacts felt by all of Delaware's taxpayers. The magnitude of the state's role in infrastructure provision can be clearly seen when the funding of transportation, wastewater, drinking water, schools, and other relatively immobile infrastructure is examined.

The State provides capital funds for a wide range of public infrastructure and facilities that serve all Delawareans. These investments include roads, bridges, schools, parks, libraries, water and sewer systems, courts, prisons, open space and natural resource protection, public housing, and community redevelopment projects among others. Almost without exception these investments are dependent in one way or another on land use patterns and the trends related to

urban and suburban growth in the State. Quite simply, for these investments to be beneficial to the people they are meant to serve they must be planned and constructed in relation to where current and future Delawareans are going to live and work, and how they are going to travel between the two.

In reviewing the State budget for fiscal years 2002 and 2003 as an example it can be demonstrated that between \$240 and \$253 million in State funds were expended on these types of capital infrastructure and facility projects each year. In addition, in these budget years the State was responsible for allocating between \$125 and \$126 million in Federal and other funds for transportation and housing projects, which increased the total amount expended upon capital infrastructure and public facilities to approximately \$366 to \$379 million per year during these two fiscal years. The State clearly has a substantial fiscal stake in where and how growth occurs in Delaware. These State Strategies are intended to ensure that State investments are well coordinated

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with local government land use decisions so that these resources are used wisely and efficiently to serve the best interests of Delaware's citizens.



DelDOT is responsible for maintaining nearly 90% of the over 12,000 lane miles in Delaware. This level of responsibility is much higher than the nationwide average of approximately 20% state maintained roads. Although 25% of

Delaware's roads are eligible for federal funds for rehabilitation and restoration projects, this leaves a majority of the funding for road rehabilitation up to the state. In addition to capital infrastructure expenditures related to the rehabilitation and construction of

roads in Delaware, an increase in the number of lane miles in the state results in an increase in the budgets for maintenance and repair since an expanded road network requires expanded support services.<sup>9</sup>

The installation, operation, and maintenance of wastewater and drinking water infrastructure has traditionally been the domain of local governments in Delaware. The state is deeply involved in the funding of wastewater and drinking water infrastructure projects. The state provides grants and loans for wastewater infrastructure projects through The Delaware Pollution Control Revolving Fund and the 21<sup>st</sup> Century Fund's Wastewater Management Account. The Wastewater Facilities Advisory Council projects that \$256.5 million in future wastewater projects will need funding through 2009.<sup>10</sup> Similar state funding is provided for drinking water projects through the Drinking Water State Revolving Fund administered by the Department of Health and Social Services' Division of Public Health.

The state also makes significant

<sup>9</sup> Delaware Department of Transportation (2002). Delaware Transportation Facts 2002. [www.deldot.net/static/pubs\\_forms/trans\\_facts/factbook\\_2002.pdf](http://www.deldot.net/static/pubs_forms/trans_facts/factbook_2002.pdf)

<sup>10</sup> Wastewater Facilities Advisory Council. (2003). Long-Term Wastewater Facilities Funding Plan FY 2004-FY2009. State of Delaware.

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infrastructure investments in schools and other relatively permanent sites. The state's 201 public schools receive nearly two-thirds of their funding from the state. The state also funds 14 State Service Centers that deliver more than 160 programs and services to accommodate approximately 600,000 visits annually. Finally, the state funds the largest police force in Delaware, The Delaware State Police, distributed in nine troops statewide.

### Land Use and Infrastructure Expenditures

Perhaps the most important local decisions that impact the need for infrastructure provision are those pertaining to land use. In particular, local land use decisions determine the location, character, and intensity of development. These development decisions influence the need for infrastructure across the state.

Many studies have been conducted that examine the relationship between patterns of development and infrastructure expenditures. The relationship between land use and transportation has been studied extensively. At a commonsense level,

much can be understood about this connection. Development of any kind usually results in some additional vehicle miles traveled. This additional travel eventually results in the need for additional road maintenance or new road construction. The amount of travel generated by a given development depends on the development's size, location, use(s), and the availability and feasibility of other modes of transportation such as public or mass transit, walking, and bicycling. Studies have concluded that the cost to maintain and construct roads can be reduced by an average of nearly one-third when sprawling development is abandoned in favor of a more compact pattern of development.<sup>11</sup>

The relationship between the cost to provide sewer and water infrastructure has also been examined in many studies. The provision of water and sewer infrastructure costs more for far-flung development because it requires the installation of more underground pipeline than development near existing service areas does. This intuitive concept is

<sup>11</sup> See reference list on pages 113-114, items: #2-5, 8, 10-12, 15, and 16.

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Expenditure Type	State Funds	Federal Funds	Other Funds	Total
<b>Fiscal Year 2003</b>				
Roads	\$84,285,454	\$69,371,180	\$436,534	\$154,093,168
Bridges	7,392,985	24,893,181	95,463	\$32,381,629
Suburban Streets	9,358,601			9,358,601
Public Education	116,649,800			116,649,800
Parks	1,080,000			1,080,000
Libraries	2,213,600			2,213,600
Minor Cap / Maint./ Resoration	6,007,000			6,007,000
Higher Education	10,500,000			10,500,000
Wastewater	3,300,000			3,300,000
Drinking Water	1,750,000			1,750,000
Judicial Facilities	2,114,100			2,114,100
Resource, Conservation, Development	4,500,000			4,500,000
State Police Facilities	0			0
Community Redevelopment Fund	1,005,000			1,005,000
Housing	3,406,000	30,567,900		33,973,900
<b>Totals FY 2003</b>	<b>\$253,562,540</b>	<b>\$124,832,261</b>	<b>\$531,997</b>	<b>\$378,926,798</b>
<b>Fiscal Year 2002</b>				
Roads	\$80,147,657	\$69,789,705	\$376,171	\$150,313,533
Bridges	8,284,952	24,539,139	681,204	33,505,295
Suburban Streets	11,164,519			11,164,519
Public Education	95,770,800			95,770,800
Parks	1,395,000			1,395,000
Libraries	3,889,300			3,889,300
Minor Cap / Maint./ Resoration	700,000			700,000
Higher Education	17,500,000			17,500,000
Wastewater	2,400,000			2,400,000
Drinking Water	0			0
Judicial Facilities	7,000,000			7,000,000
Resource, Conservation, Development	5,000,000			5,000,000
State Police Facilities	3,600,600			3,600,600
Community Redevelopment Fund	0			0
Housing	3,880,000	30,589,200		34,469,200
<b>Totals FY 2002</b>	<b>\$240,732,828</b>	<b>\$124,918,044</b>	<b>\$1,057,375</b>	<b>\$366,708,247</b>

supported by studies reporting average savings in water and sewer infrastructure costs of approximately 25% when a compact development pattern is pursued instead of a more sprawling development pattern.<sup>12</sup> In addition to hard infrastructure expenditures, operations and maintenance costs for wastewater and drinking water systems have also been found to be less costly in situations of compact development than they are in situations of sprawling development.<sup>13</sup>

The cost to provide school, service center, and law enforcement infrastructure is also influenced by patterns of land use. Development in certain locations can create new areas needing infrastructure service. Growth is best directed to areas that have excess infrastructure capacity. Studies have revealed two particular situations where a compact development pattern can reduce school spending.

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First, if growth is directed to those areas that have the ability to serve additional students, then a more efficient funding environment can be expected. Second, transportation costs under a compact development scenario would be reduced thanks to development occurring closer to schools. These findings can be applied to the provision of infrastructure such as service centers and state police barracks. If excess capacity exists at one of these sites then nearby development would result in a more efficient spending of tax-dollars. Also, development outside the area of these sites creates either the need for the construction of entirely new infrastructure or the expending of additional time and transportation costs to serve this new development.

### State Strategies and Infrastructure Planning and Provision

In part, the State Strategies are meant to act as a guide for adequate infrastructure provision throughout Delaware while minimizing the

burden placed on the state's taxpayers. With this goal in mind, three general strategies related to infrastructure provision should be encouraged. First, it is desirable that towns, counties, and the state are collectively involved in the infrastructure planning process. Next, existing infrastructure should be utilized before new infrastructure is constructed. Finally, when it is necessary to expand infrastructure, this should be done in a logical manner that aims to serve first those areas closest to existing service areas.

A variety of approaches need to be employed in order to allow for effective and efficient infrastructure planning and provision. Many of the approaches listed below are discussed in detail in other sections of this document so they will only be mentioned here.

### Infrastructure Planning Techniques

- Encourage the sharing of information through processes such as the Preliminary Land Use Service (PLUS) to expose the

<sup>12</sup> See reference list on pages 113-114, items: #2-4, 8, 10-12, 15, 16, and 19.

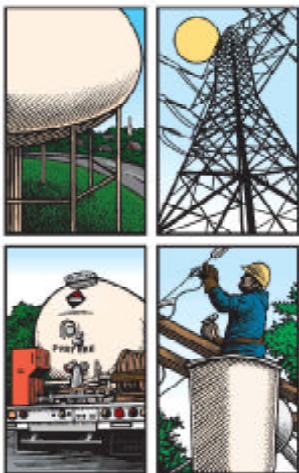
<sup>13</sup> See reference list on pages 113-114, items: #7,14, and 17.

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realities of infrastructure needs and availability.

- Encourage the adoption and use of Transfer-of-Development-Rights (TDR) programs and cluster development techniques.
- Publicize the benefits of and encourage the use of transit-oriented and mobility-friendly design standards.
- Use the research and data analysis expertise of entities such as DelDOT, the Delaware Population Consortium, the Dover/Kent MPO, and WILMAPCO



### Financial Assistance for Wastewater Management —

The Financial Assistance Branch of the Department of Natural Resources and Environmental Control (DNREC), Division of Water Resources provides planning, engineering, and financial assistance to a broad range of customers that request help in preventing or eliminating activities that cause water pollution.<sup>14</sup>

- Grants for the development of general wastewater facility plans, long range wastewater facility

plans, and regional wastewater facility plans.

- Engineering and technical assistance for developing new sanitary sewer districts or solving problems in existing sewer districts.
- Financial assistance in the form of economic feasibility studies, low interest loans, and grants for wastewater projects that eliminate sources of pollution or prevent future sources of pollution.

### Safe Drinking Water

#### Drinking Water State Revolving Fund (DWSRF) – Capacity Development Program

DWSRF offers low interest loans and grants to community water systems for infrastructure improvements. The DWSRF assists community water systems in improving existing infrastructure to serve existing customers more efficiently.

The Capacity Development Program is helping public water systems in Delaware have technical, managerial and financial capabilities to meet the requirements of the Safe Drinking Water Act.

<sup>14</sup> For more information call Branch Administrator: Alan J. Farling, P.E. at (302) 739-5081.