

# Energy Conservation: MCPS -- No. 796222

Category **MCPS**  
 Agency **Public Schools**  
 Planning Area **Countywide**  
 Relocation Impact

Date Last Modified **May 19, 2006**  
 Previous PDF Page Number **7-276 (02 App)**  
 Required Adequate Public Facility **NO**

## EXPENDITURE SCHEDULE (\$000)

| Cost Element                     | Total         | Thru FY05  | Est. FY06  | Total 6 Years | FY07         | FY08         | FY09         | FY10         | FY11         | FY12         | Beyond 6 Years |
|----------------------------------|---------------|------------|------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Planning, Design and Supervision | 1,350         | 0          | 40         | 1,310         | 310          | 200          | 200          | 200          | 200          | 200          | 0              |
| Land                             |               |            |            |               |              |              |              |              |              |              |                |
| Site Improvements and Utilities  |               |            |            |               |              |              |              |              |              |              |                |
| Construction                     | 8,823         | 128        | 450        | 8,245         | 1,245        | 1,400        | 1,400        | 1,400        | 1,400        | 1,400        | 0              |
| Other                            | 675           | 20         | 10         | 645           | 145          | 100          | 100          | 100          | 100          | 100          | 0              |
| <b>Total</b>                     | <b>10,848</b> | <b>148</b> | <b>500</b> | <b>10,200</b> | <b>1,700</b> | <b>1,700</b> | <b>1,700</b> | <b>1,700</b> | <b>1,700</b> | <b>1,700</b> | <b>0</b>       |

## FUNDING SCHEDULE (\$000)

|               |        |     |     |        |       |       |       |       |       |       |   |
|---------------|--------|-----|-----|--------|-------|-------|-------|-------|-------|-------|---|
| G.O. Bonds    | 10,848 | 148 | 500 | 10,200 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 0 |
| Contributions | 0      | 0   | 0   | 0      | 0     | 0     | 0     | 0     | 0     | 0     | 0 |

## ANNUAL OPERATING BUDGET IMPACT (\$000)

|                   |  |  |  |               |             |             |               |               |               |               |          |
|-------------------|--|--|--|---------------|-------------|-------------|---------------|---------------|---------------|---------------|----------|
| Maintenance       |  |  |  | -2,916        | -162        | -324        | -486          | -648          | -648          | -648          | 0        |
| Energy            |  |  |  | -4,566        | -275        | -550        | -825          | -972          | -972          | -972          | 0        |
| <b>Net Impact</b> |  |  |  | <b>-7,482</b> | <b>-437</b> | <b>-874</b> | <b>-1,311</b> | <b>-1,620</b> | <b>-1,620</b> | <b>-1,620</b> | <b>0</b> |
| Workyears         |  |  |  | 0.0           | 0.0         | 0.0         | 0.0           | 0.0           | 0.0           | 0.0           | 0.0      |

### DESCRIPTION

The MCPS Energy Conservation Program has saved more than \$34 million since the project began in FY 1978. The project has been reviewed by the Interagency Committee on Energy and Utility Management. The program is designed to reduce energy consumption by improving building mechanical systems, retrofitting building lighting and control systems, and controlling HVAC equipment through computer management systems. Computer systems currently control the operation of most MCPS facilities.

New and modernized schools are built with the latest technological advances to achieve higher levels of energy savings. Energy conservation staff review new construction mechanical guidelines and designs. Staff also inspect and perform computer diagnostics of HVAC installations for operational efficiency and review certain aspects of indoor air quality. An FY 2001 Supplemental Appropriation of \$1.5M was approved for lighting ballast replacement. Funds approved in FY 2002 were approved to continue this program. In FY 2001 and beyond, \$439,000 for staff charges were migrated from the Capital Budget to the Operating Budget.

An FY 2003 appropriation was approved to continue to reduce energy consumption by improving mechanical systems, retrofitting building lighting and control systems, and controlling HVAC equipment in MCPS facilities. An FY 2004 appropriation was approved to continue this project at its current level of effort.

An FY 2005 appropriation was approved to continue this project. The increase in expenditures, beyond the level of effort for this project for FY 2005 and beyond, is due to the need to modernize energy management systems facing obsolescence. Of the over 170 installed energy management systems, many were installed in the 1980's and are approaching the end of their life-cycle, and replacement parts are no longer available. The approved FY 2005 appropriation and the FY 2006 appropriation include \$250K to complete pilot projects and select replacement technologies, including network and web interfaces. The expenditures shown for FY 2007 will achieve an economy of scale by bidding a large package of projects together. Expenditures shown over the six-year period will be used to complete the countywide lighting modernization program at the remaining 31 facilities. Expenditures shown for FY 2008-2010 will be used for the ongoing life-cycle replacement costs of energy management and control systems at over 170 facilities, to support the extension of the program to the remaining facilities, to support a planned program of water conservation projects, and to avoid future backlog in this area. An FY 2006 appropriation was approved to continue this project. An FY 2007 appropriation was approved to continue this project at its current level of effort.

\*This project will continue indefinitely.

### FISCAL NOTE

State Reimbursement: not eligible

|   |                          |               |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
|---|--------------------------|---------------|---------|-----------------------|--|-------|---------------------|--|--|---------------|------|-------|-------------------------|--|-------|-----------------------|--|--------|-----------------------|------|-------|-------------------------|------|-------|------------------------------------|------|---|----------|--|---|--------------------------|-----|---------------------------|-----|----------------------|-----|-----------------------|------|--------|----------------------|------|-----|-------------------------------|--|---------------|---|---|
| <p><b>APPROPRIATION AND EXPENDITURE DATA</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Date First Appropriation</td><td>FY79</td><td>(\$000)</td></tr> <tr><td>Initial Cost Estimate</td><td></td><td>1,200</td></tr> <tr><td>First Cost Estimate</td><td></td><td></td></tr> <tr><td>Current Scope</td><td>FY96</td><td>8,061</td></tr> <tr><td>Last FY's Cost Estimate</td><td></td><td>7,956</td></tr> <tr><td>Present Cost Estimate</td><td></td><td>10,848</td></tr> </table><br><table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Appropriation Request</td><td>FY07</td><td>1,700</td></tr> <tr><td>Appropriation Req. Est.</td><td>FY08</td><td>1,700</td></tr> <tr><td>Supplemental Appropriation Request</td><td>FY06</td><td>0</td></tr> <tr><td>Transfer</td><td></td><td>0</td></tr> </table><br><table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Cumulative Appropriation</td><td>648</td></tr> <tr><td>Expenditures/Encumbrances</td><td>137</td></tr> <tr><td>Unencumbered Balance</td><td>511</td></tr> </table><br><table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Partial Closeout Thru</td><td>FY04</td><td>18,468</td></tr> <tr><td>New Partial Closeout</td><td>FY05</td><td>508</td></tr> <tr><td><b>Total Partial Closeout</b></td><td></td><td><b>18,976</b></td></tr> </table> | Date First Appropriation | FY79          | (\$000) | Initial Cost Estimate |  | 1,200 | First Cost Estimate |  |  | Current Scope | FY96 | 8,061 | Last FY's Cost Estimate |  | 7,956 | Present Cost Estimate |  | 10,848 | Appropriation Request | FY07 | 1,700 | Appropriation Req. Est. | FY08 | 1,700 | Supplemental Appropriation Request | FY06 | 0 | Transfer |  | 0 | Cumulative Appropriation | 648 | Expenditures/Encumbrances | 137 | Unencumbered Balance | 511 | Partial Closeout Thru | FY04 | 18,468 | New Partial Closeout | FY05 | 508 | <b>Total Partial Closeout</b> |  | <b>18,976</b> | <p><b>COORDINATION</b></p> <p>Montgomery College<br/>             County Government<br/>             Comprehensive Facilities Plan<br/>             Interagency Committee - Energy and Utilities Management<br/>             MCPS Resource Conservation Plan<br/>             County Code 8-14a</p> | <p><b>MAP</b></p> <p style="text-align: center;"><b>MONTGOMERY COUNTY, MD</b></p> |
| Date First Appropriation  | FY79                     | (\$000)       |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Initial Cost Estimate   |                          | 1,200         |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| First Cost Estimate   |                          |               |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Current Scope   | FY96                     | 8,061         |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Last FY's Cost Estimate   |                          | 7,956         |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Present Cost Estimate   |                          | 10,848        |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Appropriation Request   | FY07                     | 1,700         |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Appropriation Req. Est.   | FY08                     | 1,700         |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Supplemental Appropriation Request  | FY06                     | 0             |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Transfer  |                          | 0             |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Cumulative Appropriation  | 648                      |               |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Expenditures/Encumbrances   | 137                      |               |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Unencumbered Balance  | 511                      |               |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| Partial Closeout Thru   | FY04                     | 18,468        |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| New Partial Closeout  | FY05                     | 508           |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |
| <b>Total Partial Closeout</b>   |                          | <b>18,976</b> |         |                       |  |       |                     |  |  |               |      |       |                         |  |       |                       |  |        |                       |      |       |                         |      |       |                                    |      |   |          |  |   |                          |     |                           |     |                      |     |                       |      |        |                      |      |     |                               |  |               |   |   |