

## *Stormwater Management*

### 29-02-Stormwater Capital Projects Design

| Fund/Agency: 001/29                                 | Stormwater Management |  |
|---|-----------------------|--|
| Personnel Services                                  | \$645,922             | <p><b>CAPS Percentage of Agency Total</b></p> <p>1.9%</p> <p>98.1%</p> <p>■ Stormwater Capital Projects Design<br/>■ All Other Agency CAPS</p> |
| Operating Expenses                                  | \$10,244              |  |
| Recovered Costs                                     | (\$504,064)           |  |
| Capital Equipment                                   | \$0                   |  |
|   |                       |  |
| <b>Total CAPS Cost:</b>                             | <b>\$152,102</b>      |  |
|   |                       |  |
| Federal Revenue                                     | \$0                   |  |
| State Revenue                                       | \$0                   |  |
| User Fee Revenue                                    | \$0                   |  |
| Other Revenue                                       | \$0                   |  |
|   |                       |  |
| <b>Total Revenue:</b>                               | <b>\$0</b>            |  |
|   |                       |  |
| <b>Net CAPS Cost:</b>                               | <b>\$152,102</b>      |  |
|   |                       |  |
| Positions/SYE involved in the delivery of this CAPS | 11/11                 |  |

#### ► CAPS Summary

The Stormwater Capital Projects Design CAPS consists of the design staff of the Stormwater Planning Division. This CAPS is responsible for the scope development, design, and project management of capital projects assigned to this Branch. This CAPS participates in the scoping phase of drainage projects, prepares in-house designs, selects consultant firms for projects that are designed by consulting firms, requests topographical surveys for design, prepares easement plats for land acquisition, prepares cost estimates, conducts citizen meetings, coordinates projects with all utility companies, obtains all local, state, and federal permits, and monitors project budgets from initiation through completion of construction.

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The stormwater capital improvement projects designed and managed by this CAPS address:

- projects mandated by state or federal regulations for immediate implementation and address critical or emergency dam safety issues
- projects that alleviate damage to structures from floodwater or from being undermined by severe erosion
- projects that enhance stormwater quality in compliance with the County's obligations under the Chesapeake Bay initiative under VPDES
- projects that deal with control of severe streambank and channel erosion
- projects that alleviate moderate and minor streambank and channel erosion
- projects that alleviate yard flooding; and projects that alleviate road flooding.

The storm drainage improvement projects designed and managed by this CAPS are generally of following types:

- underground storm sewer extensions and improvements
- streambank stabilization utilizing conventional and bio-engineering techniques and materials
- flood proofing of dwellings; regional retention and detention ponds meeting local and state dam standards
- retrofitting of existing retention and detention ponds with BMPs to improve water quality
- retrofitting and upgrading of existing dams
- design for repair of existing dam embankments to promote safety and to enhance water quality
- dredging of lakes and ponds and neighborhood improvement projects requiring upgrade of existing roadways, walkways, and storm sewers.

The very small projects affecting one or very few properties are generally designed by in-house staff and are funded within Fund 308, Public Works Construction. Large storm drainage improvements and streambank restoration projects have been generally funded within Fund 310, Storm Drainage Bond Construction. The regional ponds and stream restoration and drainage improvement projects are funded within Fund 316, Pro Rata Share Drainage Construction.

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## ► Method of Service Provision

The initial project scopes and budgets are developed collaboratively with participation of staff from Stormwater Planning Division and Maintenance and Stormwater Management Division with assistance from the Fairfax County Park Authority (FCPA) and the Northern Virginia Soil and Water Conservation District (NVSWCD). These projects are further coordinated with staff from the Land Acquisition Division (LAD) and Construction Management Division (CMD) of the Office of Capital Facilities of the Department of Public Works and Environmental Services (DPWES). The in-house staff of this CAPS performs the design and all related tasks for smaller projects. The larger Storm Bond and Pro Rata Share design contracts are generally awarded to qualified consultant firms for design and permit acquisition. The design staff manages the consultant design contracts and monitors the budget of assigned projects. The construction contracts are awarded and managed through CMD, a division of the Office of Capital Facilities. Recently, the construction industry's trend is to employ bio-engineering techniques and materials and to utilize soft-engineering approaches for stabilizing stream channels.

## ► Mandate Information

This CAPS is Federally or State mandated. The percentage of this CAPS' resources utilized to satisfy the mandate is 51-75%. The specific Federal or State code and a brief description of the code follows:

### Federal

- Public Law PL-566
- 1972 Federal Pollution Control Act
- 40 CFR Parts 122-124, 504 (Amendments to the 1987 Clean Water Act requiring National Pollutant Discharge Elimination System (NPDES) Permits for stormwater discharges)
- Clean Water Act Section 404 (Wetlands Law & Regulations)
- 44 CFR Parts 59-77 (Floodplain Management and Protection Regulations)
- Section 402 Clean Water Act, NPDES Permit

### State

- Code of Virginia 10.1-603 et seq (VA Stormwater Management Law), 15.1-510 and 62.1-11 Department of Conservation and Recreation Regulation VR 215-02-00
- Code of Virginia 10.1-560 et seq (VA Erosion and Sediment Control Law)
- VA Soil and Water Conservation Board Regulation VR 625-02-00
- Code of Virginia 10.1-2100 (Chesapeake Bay Preservation Act)
- Code of Virginia 10.1-604 et seq.
- Code of Virginia 62.1-13.5, VR 680-15-02 (VA Water Control Board 401 Water Protection Permit Regulations)
- Code of Virginia 62.1-44, Code 9 VAC 25-30-10 VDPES Permit.