

City of Newport News

Stormwater Operations

The mission of the Stormwater Operations Division is to protect the environment through the effective management, operation and maintenance of the stormwater systems, to provide vector control services designed to educate the public and to detect, reduce or eliminate potential disease carrying vectors.

Introduction

Physical Infrastructure

- 425 miles of Drainage Pipes
- 18,500 Catch Basins
- 51 Stormwater Management Facilities (Lakes & Retention Ponds)
- 60 miles of Major Outfall Ditches
- 70 miles of Back & Side Lot Ditches
- 50 miles of Roadside Ditches
- 69 Sq. Miles / Newport News footprint

I. Administration

A. Administrator and Assistant Administrator

1. Implement Policy directives from the Public Works Director, Assistant City Managers, and the City Manager
2. Responsible for the daily operation
3. Balance the budget
4. Oversees disciplinary action

B. Superintendents

1. Operations - Manages the city-wide drainage systems and lake cleaning operations.
2. Vector - Responsible for the overall management and supervision of the integrated pest management system designed to minimize disease vectors city-wide and maintaining and repairing stormwater back and side lot ditches, barscreens, grates and inlet structures.

C. Operations Supervisors

1. Operations Supervisor – Construction - Oversees and supervises crews in the Analysis, Inspection, Maintenance and Support (AIMS), and Construction unit responsible for inspecting and cleaning storm sewer systems, performing roadside ditch maintenance activities, installing, maintaining and repairing storm sewer pipes, catch basins, manholes, building riprap walls, headwalls, drop inlets and installing erosion control measures.
2. Operations Supervisor – Lots and Ditches - Responsible for the supervision of crews responsible for maintaining and repairing stormwater back and side lot ditches, barscreens, grates and inlet structures.

D. Administrative Assistants

1. Process Work Orders and Service Requests
2. Dispatch Service Requests
3. Process invoices and perform other calculations

II. A.I.M.S. Analysis, Inspection, Maintenance, Support

1. Flushing Operations – Vactor truck – Uses high pressure hoses to clean and flush drainage structures and storm sewer pipes.
2. Inflow & Infiltration – CCTV truck - Installs and operates closed-circuit camera equipment to inspect, analyze and detect leaks, cracks and other defects and damages in existing storm sewer lines; tests and determines the condition of pipe joints, notes the location of any damaged pipe
3. Roadside Ditch Regrading - Operates the tandem ditcher and tandem and single axle dump trucks to install and maintain ditch cleaning operations.

III. Back and Side Lot Ditch Maintenance

4. Construction Crew - Regrade and repair swales that are maintained by the Back and Side Lot Operation.
5. Maintenance Crew - Clean back, side lot, and roadside ditches to ensure proper drainage.
6. Inspect and clean over 156 barscreens weekly to prevent flooding and unwanted debris from entering our stormwater systems and our natural water ways.

IV. Construction

1. Master Equipment Operator - Operates equipment such as a hydraulic excavator, rubber tire and track loaders, backhoes and other heavy equipment to clean and re-grade drainage ditches.
2. Pipelayer - Installs, repairs and maintains storm sewer pipes of various sizes, performs proper sealing of pipe and structure joints, and ensures precision line and grade of pipe systems utilizing transit levels, grade rods, and laser beam aligners.
3. Sr. Construction Maintenance Worker - Performs heavy manual work in excavated trenches below ground level in the maintenance, repair and installation of storm sewer lines. Also builds, repairs, and cleans storm drains.

V. Lakes and Major Outfalls

- A. Equipment Operator Specialists, Master Equipment Operators, and Sr. Equipment Operators all operate hydraulic and walking excavators, rubber tire and track loaders, backhoes, tractor trailer combination, tandem dump trucks with attachments and other heavy equipment to contribute to the following:

1. Cleaning, Regrading, and Dredging Lakes, Major Outfalls, and Ponds.
2. Erosion Control – Maintain ditch banks
3. Shoreline repair - build and repair riprap walls, headwalls, and seawalls
4. Clean Box culverts
5. Operate and maintain spoils dumping site
6. Mowing grass and clearing vegetation on all major outfalls

VI. Vector Control

A. Mosquito Control is a Four Component Program consisting of the following:

1. Education – School presentations, news reports, conferences, pamphlets.
2. Surveillance – Setting traps, identifying species, testing mosquitoes for diseases, source reduction.
3. Larviciding – Using environmentally friendly products eradicate breeding sites.
4. Adulticiding – Using an Ultra-Low Volume, truck mounted sprayer to provide immediate relief of adult flying mosquitoes.

B. Herbiciding – Applying an environmentally safe growth regulator to ditch banks and all other storm sewer system City assets to control weed growth.

C. Rodenticiding – Setting bait stations in City easements to control the rodent population while protecting children, dogs, and cats from accidental poisoning by preventing them from coming into contact with the rodent bait block.

Conclusion

- A. Protect our region's natural waterways
- B. Ensure proper drainage of water to mitigate flooding issues
- C. Maintain storm sewer system infrastructure