Stormwater Management System Operation and Maintenance Plan

Prepared For:

Pulte Homes

St. Lucie County
Florida

Project No. 24-1479

Prepared By:

Keshavarz & Associates, Inc.
711 N. Dixie Highway, Suite 201
West Palm Beach, FL 33401

I. Introduction

The proposed improvements for the project include the construction of 246 single-family homes, a clubhouse, a pool, and the associated sidewalks and roadways to support the development. The Stormwater Management (SWM) system includes an underground stormwater network, multiple dry retention areas, and two wet detention lakes. The site is situated within the jurisdiction of the South Florida Water Management District (SFWMD) and the North Saint Lucie River Water Control District (NSLRWCD). Stormwater will be discharged to NSLRWCD Canal No. 39, located along the southern boundary of the property.

The purpose of this Stormwater Management System Operation and Maintenance Plan ("O&M Plan") is to provide the Cornerstone Homeowners Association (HOA) with a framework to establish a maintenance and operation program for the SWM system. Per Section 373.416(2), Florida Statutes, the entity responsible for the operation and maintenance of the SWM system is Cornerstone Homeowners Association, Inc. The HOA must retain a copy of this O&M Plan, along with the final approved plans and specifications submitted in accordance with Chapter 62-330, F.A.C. If a third-party entity manages the system on behalf of the permittee, the permittee remains ultimately responsible for ensuring compliance with all operational and maintenance requirements.

II. System Description

In compliance with SFWMD criteria, the project is required to provide wet detention storage to ensure water quality. This includes either 2.5 inches multiplied by the percentage of impervious surfaces or the first inch of rainfall, whichever is greater. This detention volume will be accommodated by the on-site lakes and managed through a proposed control structure with a bleed-down rate of 1.06 cfs (13.5 CSM max over 50.37 acres), discharging into NSLRWCD Canal No. 39.

III. Inspection and Maintenance

The operational details and maintenance requirements for each component of the SWM system are outlined in the following sections. The HOA will engage a Qualified Registered Professional to perform inspections as specified below. Following each inspection, a written report will be prepared, identifying any deficiencies requiring corrective action by the property manager.

A. Stormwater Inlets, Drainage Structures, and Pipes

- Inlet and catch basin grates must remain free of obstructions, with the interior kept clean.
- Check for sediment buildup, trash, or debris inside the basins and connecting pipes. Blockages or damaged pipes should be investigated and addressed promptly.
- Inspect the interior of the structures for signs of concrete damage or rust.
- Standing water near inlets must dissipate within 48 hours of rainfall. Persistent standing water beyond this period requires immediate investigation by a licensed storm drain cleaning contractor.

B. Swales and Grassed Water Storage Areas

- Swales facilitate the movement and temporary storage of stormwater and often accumulate vegetation and sediment over time. Regrading and replanting may be necessary periodically.
- Compare the current slope and dimensions of the swales with the permitted design plans before undertaking sediment removal or regrading work.
- Stabilize eroded areas with sod, plantings, rocks, sandbags, or synthetic geotextiles.
- Regular mowing of swales is essential, as they also improve water quality by filtering sediment and nutrients. Remove invasive or unwanted vegetation.

C. Wet Detention Pond (Lake)

- Regularly remove debris and trash from the pond's surface and perimeter to maintain water quality and storage capacity.
- Inspect pond banks for erosion, and stabilize affected areas through vegetation replanting or artificial methods.

D. Earthen Embankments (Berms)

- Ensure berm elevations, widths, and stabilization are properly maintained.
- Address damage caused by vehicles, equestrian activity, or erosion from rainfall promptly. Repairs should include compaction and re-vegetation to restore stability.

IV. Inspection Schedule

O&M Manual ITEMS

Table 12-1 from Environmental Resource Permit Applicant's Handbook – Volume I

Ite	TYPE OF SYSTEM	INSPECTION
1)	Stormwater Inlets, Drainage Structures, and Pipes	Once every year
2)	Swales and Grassed Water Storage Areas	Once every 3 years
3)	Wet Detention Pond (Lake)	Once every 2 years
4)	Earthen Embankments (Berms)	Once every 5 years

V. Operation and Maintenance Inspection Certification

- See "Form 62-330.311(1) – Operation and Maintenance Inspection Certification" per 62-330.311(2), F.A.C.

VI. Inspection Checklist

- See "Form 62-330.311(1) – Stormwater Facility Inspection Checklist" per 62-330.311(2), F.A.C.