

General Certification Assessment Checklist

for

Open, Vegetated, Sand Filters

Date of Certification Assessment: _____

Assessing and Certifying NCPE: _____ Seal:

BCE #: _____

SCM Facility Name: _____

Access Address: _____

PIN/s of Parcel/s Where the Facility is Sited: _____

SCM and Access Easement Information:

DB _____ PG _____ PB _____ PG _____

CHECKLIST

CDs: Approved Construction Drawings

NC: Non-compliant with the Approved CDs and/or City of Durham Requirements and Policies. Note: An "NC" should only be circled if the element in question is non-compliant.

Y: Yes

N: No

N/A: Not Applicable. If an element is not applicable, please write "N/A" next to the element.

A. Drainage Area – 2 Points

- The drainage area to the facility is less than 5 acres and is, characteristically, 90% impervious or greater _____. NC
- The drainage area to the facility is completely stabilized, and no excess sediment is discharging into the sediment chamber or sand filter _____. NC

B. Easements and Accessibility -- 1 Point

- The constructed SCM facility is located entirely in a recorded SCM easement _____. NC
- The constructed access way is located entirely in a 20-ft wide recorded access easement _____. NC
- Unobstructed maintenance vehicle access from a nearby public or private right-of-way (i.e., road, parking lot, etc.) has been provided to the control structure and all inlets _____. NC
- At its narrowest point, the access width is _____. NC
- At its steepest point, the centerline grade of the access is _____. NC

- At its steepest pitch, the pitch or cross-slope of the access is _____. NC
- Unless it has been surfaced with gravel, asphalt, concrete, etc., 85% of the access way has achieved a healthy stand of grass, and all remaining areas have been seeded and mulched _____. NC
- An access hatch and steps down the inside of the riser/control structure have been provided in accordance with the CDs _____. NC

C. Dam Embankment -- 2 Points

- The narrowest top of dam width is _____. NC
- The steepest slope on the upstream face of the dam is _____. NC
- The steepest slope on the downstream face of the dam is _____. NC
- Based on manual rod probings of the dam, particularly in the zones over and around the principal spillway pipe, the dam appears to have been well compacted _____. NC
- The dam and dam foundation, groin, toe, and abutment areas are completely free of trees, landscaping, and other woody growth _____. NC
- The dam has been fine graded and is free of ruts, erosion, etc. _____. NC
- 85% of the dam embankment and dam foundation, groin, toe, and abutment areas have achieved a healthy stand of grass, and all areas that have not achieved a healthy stand of grass have been seeded and mulched. The dam is not overgrown and there is no undesirable vegetation _____. NC
- No evidence of seepage was noted on the downstream face of the dam _____. NC

D. Emergency Spillway -- 1 Points

- The narrowest width of the control section is _____. NC
- The side slopes of the control structure are [Left] _____ and [Right] _____. NC
- The size, shape, and alignment of the exit channel are in accordance with the CDs _____. NC
- Armoring has been installed in accordance with the CDs _____. NC
- The spillway has been fine graded and is free of ruts, erosion, etc. _____. NC
- Excluding the hard-surfaced armored area, 85% of the spillway has achieved a healthy stand of grass, and all remaining areas have been seeded and mulched. The spillway is not overgrown and there is no undesirable vegetation _____. NC

E. Riser/Control Structure and Principal Spillway Pipe -- 2 Points

- The riser/control structure is reinforced concrete _____. NC
- The diameter or opening dimensions of the riser is/are _____. NC
- A top, peak-roofed trash rack has been provided and bolted down to the riser _____. NC
- The riser structure and all appurtenant devices appear to be sound _____. NC
- The riser is free of debris or obstructions _____. NC

- For precast structures, the barrel sections were installed with gasketed joints, and adjacent riser barrel sections have been bolted together with steel strapping _____. NC
- All orifices, siphons, ports, and weirs were installed in accordance with the CDs _____. NC
- The anti-floatation ballast has been provided in accordance with the CDs _____. NC
- A placed concrete invert to the invert out of the principal spillway pipe (PSP) has been provided _____. NC
- The PSP is reinforced concrete _____. NC
- The diameter of the PSP is _____. NC
- Based on a visual inspection, it appears that the joints of the PSP were “homed” reasonably well, and it appears that no joints are leaking _____. NC

F. Sediment Chamber (Forebay) -- 2 Points

- The sediment chamber minimum size has been installed in accordance with the CDs _____. NC
- A minimum depth of 3 feet (in the deepest portion) has been provided in the sediment chamber _____. NC
- The top of the forebay berm has been installed level, and 100% of the berm has either achieved a healthy stand of turf grass or been armored in accordance with the CDs _____. NC
- All accumulated sediment and other debris in the sediment chamber have been removed _____. NC
- All inlet pipes have been installed with appropriate end treatments in accordance with the approved CDs _____. NC

G. Sand Chamber -- 4 Points

- The sand chamber minimum size has been installed in accordance with the approved CDs _____. NC
- The sand chamber has been constructed such that the maximum head above the sand layer is in accordance with the approved CDs _____. NC
- The required filter media mix, including the minimum mix depth, has been installed in accordance with the approved CDs, and there is no sediment in the sand filter media _____. NC
- The underdrain system has been installed in accordance with the approved CDs _____. NC
- All side slopes leading to the sand chamber are no steeper than 3:1 _____. NC
- Any flow splitters or bypass systems have been constructed in accordance with the approved CDs _____. NC
- Even flow distribution into the sand chamber has been provided in accordance with the CDs and is not creating scour in the sand chamber _____. NC
- The bottom of the lowest part of the underdrain system is located at least two feet above the seasonal high water table _____. NC
- 85% of the plantings specified in the approved CDs are thriving _____. NC

- The filter has been observed by the certifying engineer to drawdown the runoff from the first inch of rainfall in a manner consistent with that specified in the approved CDs _____. NC

H. Outfall Structure and Outfall Area -- 1 Points

- The control structure has been installed in accordance with the CDs _____. NC
- The outfall structure is a concrete endwall (with wingwalls if required) _____. NC
- Appropriate fall protection has been provided across the top of the structure _____. NC
- A stilling basin (plunge pool) has been provided in accordance with the CDs _____. NC
- The outfall area appears stable, and all accumulated silt and debris has been removed _____. NC

BCE's Score: _____

City of Durham's Score: _____

Scoring Notes:

- (1) A passing score shall be 14 out of 15;
- (2) If any item within a section is deemed NC, no points shall be awarded for that section;
- (3) If a BCE awards a score of anything less than 15 and submits an as-built and construction certification to the City anyway, the City will reject the entire submittal.