Stormwater Management Plan (SWMP) Requirements
for Compliance with CZO Article 23: Landscape, Stormwater Management, & Screening

Please submit one hard copy and one digital copy of your SWMP to the CPC in person. Incomplete applications will not be accepted.

Stormwater Management Plans shall be prepared by a registered landscape architect licensed by the Louisiana Horticulture Commission or a registered professional engineer licensed by the Louisiana Professional Engineering and Land Surveying Board (LAPELS). For all sites one (1) acre or more, a registered professional engineer must approve (stamp) all pertinent drainage and retention calculations. The CPC Executive Director reserves the right to require a registered landscape architect to approve (stamp) and/or delineate all pertinent green infrastructure planting BMP improvements.

For all sites one (1) acre or more, a Stormwater Pollution Prevention Plan (SWPPP) is required to be prepared and submitted with the application per the standards of Louisiana Pollutant Discharge Elimination System (LPDES) Storm Water General Permits & Requirements.

All Stormwater Management Site Plans shall include the following:

BASE REQUIREMENTS

- Plans shall be submitted in BOTH digital and hard copy as a part of the Final Plan approval process:
  HARD COPY: Site Plans shall be submitted on 24”x36”, required descriptions and narratives shall be submitted on 8.5”x11”
  -AND-
  DIGITAL: Final Site Plans shall be submitted in both .pdf and .dxf, .dwg, or ESRI compatible file format; Final required descriptions and narratives shall be submitted in .pdf file format.
- Engineering Scale shall be 1”=20’, 1”=30’, 1”=40’, or 1”=50’; if the project is too large, provide a sheet showing an overall plan, with separate pages showing detail at 1”=20’
- Project Title
- North Arrow
- Designer(s) company name, address, and telephone number
- Seal and signature of the engineer or landscape architect preparing the plans, and the date the plans were signed by the engineer, when applicable. Electronic files must be digitally stamped
- Blank space for approval in the lower right hand corner at least 5”x3” on the first sheet
- City-parish limit line, when located in or near the site
- Municipal address(es) of the petitioned property
- Petitioned property and adjacent right-of-ways
- Show the natural topography of the site, at a maximum of 1’ elevation intervals. If the site is less than 2% slope, point elevations are required at a minimum of every 25’ and at the property line and including any significant topographic features. NAVD88
- All above ground, surface and sub-surface infrastructure, including but not limited to drainage lines, water, sewer, electricity, and natural gas, cable, fiber, telephone.
- All existing and future dedicated easements

NAMING CONVENTIONS

- File names for SWMP documents submitted for review should correspond to the required SWMP component of this checklist. If multiples sheets of the same component are needed, place a decimal after the second number. For example, if multiple Existing Storm Drainage Site Plans are required, name as follows:

1.3.1 Existing Storm Drainage Site Plan
1.3.2 Existing Storm Drainage Site Plan

All Stormwater Management Plans shall include the following:

1. **SITE ASSESSMENT:** The location of the petitioned property and adjacent developments, to include all above ground, surface and sub-surface infrastructure, as well as existing site conditions, including a description and topographic map of land cover, contours, and a description and map of soil types.

   Plan showing areas and capacities of all surface and subsurface detention, retention, and conveyance structures including existing drain lines, culverts, catch basins, headwalls, manholes, and stormwater Best Management Practices (BMPs) as articulated in CZO Article 23.

   Minimum Requirements in addition to Base Requirements:

   ☐ **1.1** Existing Site Plan *(Submitted in both .pdf and .dxf, .dwg, or ESRI compatible file format)*
   - Location of the petitioned property
   - Any existing buildings or structures, curb cuts, interior streets, driveways, parking areas and loading areas, square footage of the vehicular use area and other impervious surfaces
   - All adjacent land uses
   - Land cover type (pavement, rooftop, lawn, landscaping, etc)

   ☐ **1.2** Existing Storm Drainage Area Map *(see example)*
   - Delineate impervious versus pervious areas
   - Chart of drainage calculations in gallons which will reference the Drainage Area Map and include analyses such as hydrologic assumptions, detention and runoff applications, and assessment hydraulic capacities for outfall structures. Calculations will include infiltration rate/time to drain

   ☐ **1.3** Existing Storm Drainage Site Plan *(Submitted in both .pdf and .dxf, .dwg, or ESRI compatible file format)*
   - All storm drainage systems and invert elevations, including but not limited to: existing drain lines, culverts, catch basins, headwalls, manholes, and stormwater Best Management Practices (BMPs).
   - Location and size of existing sub-catchment basins
   - USDA NRCS soil type

   ☐ **1.4** Existing Storm Drainage Conditions Description *(narrative)*
   - Size and location of the site and brief description of adjacent property
   - Existing structures
   - All above ground, surface and sub-surface infrastructure
   - Existing topography
   - Land cover type (pavement, rooftop, lawn, landscaping, etc)
   - USDA NRCS Soil Type
   - Existing drainage infrastructure, including both green and grey infrastructure types and invert elevations
   - Applicant will indicate the receiving drainage catchment basin. Please reference Louisiana State Plumbing Code (LSPC) Part XIV (LAC51:XIV) pursuant to the Sewerage and Water Board Plumbing Code Section 16.1

   ☐ **1.5** Infiltration test, signed and sealed by an engineer
   - *See attachment for infiltration test standards*

2. **SITE DESIGN:** The location of the proposed development, any structures, and adjacent developments, to include all above ground, surface and sub-surface infrastructure, as well as proposed site conditions topographic map of land cover, contours, and a description and map of soil types. Plan showing areas and capacities of all surface and subsurface detention, retention, and conveyance structures including proposed drain lines, culverts, catch basins, headwalls, manholes, and stormwater Best Management Practices (BMPs) identified in Article 23 of the CZO.

   Minimum Requirements in addition to Base Requirements:

   ☐ **2.1** Proposed Site Plan *(Submitted in both .pdf and .dxf, .dwg, or ESRI compatible file format)*
   - All proposed buildings and structures, curb cuts, interior streets, driveways, parking areas and loading areas, square footage of the vehicular use area and other impervious surfaces
   - All adjacent properties
   - Land cover type (pavement, rooftop, lawn, landscaping, etc.)

   ☐ **2.2** Proposed Storm Drainage Area Map *(See example)*
   - Delineate impervious versus pervious areas
   - Chart of drainage calculations in gallons which will reference the Drainage Area Map and include analyses such as hydrologic assumptions, detention and runoff applications, and assessment hydraulic capacities for outfall structures. Calculations will include infiltration rate/time to drain

   ☐ **2.3** Proposed Storm Drainage Site Plan *(Submitted in both .pdf and .dxf, .dwg, or ESRI compatible file format)*
   - All storm drainage systems and invert elevations, including but not limited to: proposed drain lines, culverts, catch basins, headwalls, manholes, and stormwater Best Management Practices (BMPs).
   - Location and size of proposed sub-catchment basins
   - USDA NRCS soil type

   ☐ **2.4** Typical details in section views of each Stormwater BMP type. Capacities of BMPs shall show surface and sub-surface volumes (in aggregate, chambers, cisterns, etc.) in gallons. *(Submitted in both .pdf and .dxf, .dwg, or ESRI compatible file format)*
   - Total depth
   - Compositional layers indicating drainage media
   - Location, capacity, and invert elevation of overflow

   ☐ **2.5** Proposed Storm Drainage Conditions Description *(narrative)*
   - Size and location of the site and brief description of adjacent property
   - Proposed structures
   - All above ground, surface and sub-surface infrastructure
   - Proposed topography/grading
   - Land cover type (pavement, rooftop, lawn, landscaping, etc.)
   - Landscaping elements
   - USDA NRCS soil type
   - Proposed drainage infrastructure, including both green and grey infrastructure types, and invert elevations

- Applicant will indicate the receiving drainage catchment basin. Please reference Louisiana State Plumbing Code (LSPC) Part XIV (LAC51:XIV) pursuant to the Sewerage and Water Board Plumbing Code Section 16.1
- Description of safeguards to prevent short-circuiting of permanent stormwater BMPs

3. CALCULATIONS: All pertinent calculations and specifications used in the design and construction of the permanent stormwater BMPs to retain, detain, and filter the first one and one quarter (1.25) inch of stormwater runoff during each rain event. For all currently developed sites, calculations must demonstrate that the post-development runoff rate is less than the pre-development runoff rate.

Calculations must be submitted via the Calculator provided by the City of New Orleans, found on CPC One-Stop website.

Minimum Requirements:

☐ **3.1** Calculations showing that the post-development runoff rate is less than the pre-development runoff rate *(Excel Spreadsheet)*

☐ **3.2** Empirically estimated existing and expected pollutant load *(Excel Spreadsheet)*

4. **IMPLEMENTATION TIMELINE and COST ESTIMATE:** SWMP Plan construction, implementation and anticipated timeline and the estimated and itemized cost of proposed drainage and temporary and permanent stormwater BMPs.

Minimum Requirements:

☐ **4.1** Description or chart of the phases of the SWMP implementation. This must include an anticipated timeline

☐ **4.2** Description or chart of construction methods for all site BMPs used to reduce site compaction and ensure proper functioning

☐ **4.3** Chart of estimated and itemized cost of proposed drainage and temporary and permanent stormwater BMPs and associated annual maintenance cost

5. **OPERATIONS & MAINTENANCE PLAN:** A ten (10) year Operations and Maintenance (O&M) Plan or Program for all site BMPs.

Minimum Requirements

☐ **5.1** Narrative and Chart showing:
- Maintenance actions that will be performed for each stormwater BMP or drainage structure
- Contact information for the property owner, property manager, and people or department responsible for maintenance
- Frequency of maintenance actions

☐ **5.2** Estimate for a Performance Bond in the amount of 25% of the initial combined costs.

☐ **5.3** Operations and Maintenance Agreement

6. **SWPP:** For all sites one (1) acre or more, a Stormwater Pollution Prevention Plan (SWPPP) is required to be prepared and submitted with the application per the standards of Louisiana Pollutant Discharge Elimination System (LPDES) Storm Water General Permits & Requirements.

   Minimum Requirements:

   ☐ **6.1** Stormwater Pollution Prevention Plan (SWPPP) shall also be prepared and submitted at the time of permitting, in accordance with all state and federal water quality regulations.

7. **LANDSCAPE PLAN REQUIREMENTS:** All SWMP's shall meet or exceed the requirements of the Landscape Plan.

   Minimum Requirements:

   ☐ **7.1** Landscape plans shall be prepared by a registered landscape architect licensed by the Louisiana Horticulture Commission. A horticulturist/landscape contractor licensed in Louisiana may be used for projects that do not require a stormwater management plan. A landscape plan shall contain the following information:

   1. The location and dimensions of all existing and proposed structures, property lines, servitudes, parking lots and drives, roadways and rights-of-way, sidewalks, signs, refuse disposal and recycling areas, sidewalks, bicycle paths and parking facilities, fences, electrical equipment, recreational facilities, drainage facilities, and other freestanding structures, as determined necessary by the Executive Director of the City Planning Commission.

   2. The location, quantity, size, botanical name, and condition, both botanical and common, of all existing plant materials and trees, and a description of all tree preservation measures.

   3. The location, quantity, size, botanical name, and condition of all plant material and trees in the right-of-way, and indicating plant material and trees to be retained and removed.

   4. The location, quantity, size, and botanical name, both botanical and common, of all proposed plant material including, but not limited to, shade and evergreen trees, shrubs, groundcover, annuals, perennials, and turf.

   5. The existing and proposed grading of the site indicating contours at one (1) foot intervals.

   6. Building elevations of all proposed fences, walls, steps, and fixed retaining walls (cast concrete, unitized walls) on the site.

   7. Landscape plans and specifications shall be designed following sustainability principles as set forth in the sustainable landscaping Louisiana Yards and Neighborhoods (LYN) Program published by the LSU AgCenter, latest edition.

   8. Other details as deemed necessary by the Executive Director of the City Planning Commission.