



**CITY OF OAK RIDGE
STORMWATER MANAGEMENT PROGRAM
STORMWATER SUBMITTAL CHECKLIST**

Required for sites which disturb 1 acre or more, or sites which are part of a larger common plan of development or sale which cumulatively disturb 1 acre or more.

This packet and all listed applicable items are required as part of the stormwater site plan approval process. The checklist will be used by the City plans reviewers. Therefore, fully completing this checklist will help reduce delays in plan approval.

The City has adopted several BMP Manuals which provide details regarding design and construction of Stormwater Control Measures (SCMs). These manuals, all referenced documents, and additional information regarding the City's submittal requirements may be found on the City of Oak Ridge Stormwater website.

Note that the Stormwater Program reserves the right to modify this checklist at any time. This checklist does not supersede any requirements of the Stormwater Management Ordinance, or any other City Planning, Zoning, Subdivision, or other regulations and ordinances.

Instructions

Provide the requested project information below. Mark each item on the checklist to indicate that it is adequately addressed in your submittal. Please include "N/A" and/or provide additional information as necessary.

Project Name	
Total Disturbed Area (SF if < 1 ac)	acres or SF
Proposed New Net Impervious Area	SF
Receiving Water	Total Impervious Area for Property Boundary SF
Date	Will an offsite borrow / spoil site be required? Yes / No
Checklist Completed By	
Printed Name	Signature
Phone Number	E-mail Address



1. Construction Site Plan Submittal Items

Y/N NA	Notes	1.1. Before Land Disturbance Permit can be issued
		Completed Construction Site Plan Submittal Checklist (this document)
		Copy of the SWPPP, Notice of Intent (NOI) and Notice of Coverage (NOC) as submitted to TDEC once issued
		Copy of approved TDEC Notice of Coverage and/or City Land Disturbance Permit for all borrow / spoil sites (if applicable) within the City limits
		Stormwater Management Plan (SWMP) provided if post-construction pollutant treatment and/or Water Quality Buffer Zone (WQBZ) are included at the site. Supporting documentation (design calculations, geotechnical reports, etc.) signed and sealed by an Engineer (if applicable)
		Copy of all federal and state permit applications as submitted other than those listed above, and copy of all approvals (ARAP, TVA, US Army Corps, etc.)

Y/N NA	Notes	1.2. Before construction can begin
		Digital copy of all approved submittal items in PDF format, identical to the hard copy
		Land Disturbance Bond
		Pre-construction meeting must be conducted between City's stormwater inspector and the contractor (call the Stormwater Program Coordinator at 865-425-1829 to set up a meeting)

Y/N NA	Notes	1.3. Before C.O. can be issued
		As Built Plans showing the final design specifications for all stormwater infrastructure including permanent stormwater facilities and permanent riparian buffers sealed by a PE
		Approved Inspection and Maintenance Agreement for Private Stormwater Management Facilities (if applicable) signed by property owner and Approved Maintenance and Repair Plan for Private Stormwater Management Facilities
		Record of stormwater control measures facility installation (inspection letter determining that permanent stormwater measures have been installed as per the design engineer specifications (inspected by PE or LA))
		Survey to verify basin volume



2. Stormwater Pollution Prevention Plan (SWPPP) Checklist

2.1. Narrative

Y/N NA	Notes	2.1.1. General Information
		Narrative SWPPP prepared by CPESC, TN EPSC Level 2, PE or LA
		Site name and address
		Project narrative describing the existing site, intended project and all proposed land disturbance activity (not just grading and street construction)
		Schedule for the starting and estimated completion dates of each phase of the land disturbing activity *in sequence (e.g. grubbing, excavation, grading, utilities, infrastructure installation, etc.)
		Estimate of the total site area versus the estimate of total disturbed area in acres, and description of measures to limit area of disturbance
		Description of topography and percent slope estimations
		Name of receiving waters and if those waters have unavailable parameters for siltation and habitat alterations due to in-channel erosion or are Exceptional Tennessee Waters
		Description of any anticipated soil erosion and sedimentation problems resulting from existing characteristics
		General description of existing land covers. Individual trees and shrubs do not need to be identified
		Description of industrial discharge from the site (location shown and permit number) if applicable
		Description of flood zones. Note: Please contact the City if the proposed project includes work within a regulated floodplain or floodway (Call the Floodplain Coordinator at 865-425-3520)
		A description of the existing aquatic resources including any karst features, land depressions and sinkholes, intermittent and wet-weather streams, wetlands, and designated floodways or flood plains on or adjacent to the site within 100' of project site or disturbed area (also label locations on map)
		Hydrologic Determination performed by a Qualified Hydrologic Professional (QHP) if a stream on a USGS quad map is not being identified as a Water Resource
		Description of anticipated aquatic resource alterations, discharges to or remediation of sink holes, and required permits for activities if applicable (ARAP number, etc.)
		Listing of any known legally protected state or federally listed threatened or endangered aquatic or wildlife species and/or critical habitat located in the area <ul style="list-style-type: none"> ▪ Description of measures used to protect them during and after construction ▪ United States Fish and Wildlife Service approval for all protection measures
		General description of appropriate EPSCs and the general timing of implementation
		TDEC Erosion Protection & Sediment Control (EPSC) Handbook, latest edition, referenced
		Description of lot-level erosion prevention and sediment control (EPSC) measures when a lot is sold to a new owner prior to the completion of construction. New operator must obtain coverage under CGP (residential, commercial or industrial parks) if applicable
		Description of stormwater discharges from support activities in areas other than construction, and a description of controls and measures that will be implemented at those sites (off site borrow or fill areas) <ul style="list-style-type: none"> ▪ The operator of the support activity is the same as the operator of the construction site, and activities are identified in the NOI



Y/N NA	Notes	2.1.2. Construction Waste Management
		Description of construction and waste materials expected to be stored on site, and description of controls to prevent contamination from: <ul style="list-style-type: none"> ▪ Dewatering of trenches and excavations ▪ Vehicle and wheel washing ▪ Building materials and construction waste ▪ Concrete washout ▪ Petroleum products and petroleum related products ▪ Chemicals including fertilizers, pesticides, and detergents ▪ Litter and trash ▪ Sanitary waste
		Chemical spill response procedures and releases in excess of reportable quantities procedures provided

Y/N NA	Notes	2.1.3. Maintenance and Inspection Procedures
		Description of site record keeping responsibilities (grading, stabilization, inspections)
		Rain gauge and daily rainfall record information (or use reference site)
		Inspections twice weekly and 72 hours apart for EPSCs and outfalls
		Note specifying EPSC measures repaired, replaced or modified within 7 days of identifying the deficiency/need
		Copy of blank site assessment form specifying approximate day assessment will be conducted, contact info of assessor, and required certification statement from the CGP (within 30 days of construction commencing [by PE, LA, CPESC or Level II], if draining 10 acres [or 5 acres if to waters with unavailable parameters/Exceptional Waters]) or a statement verifying that no site assessment is needed

2.2. Maps

Y/N NA	Notes	2.2.1. Vicinity Map
		Topographic map with contour intervals of five (5) feet or less, showing present conditions (The scale at a minimal of one (1) inch equals one-hundred (100) feet)
		Boundaries of permitted area/lot lines

Y/N NA	Notes	2.2.2. Soils Map
		Soils map, with Hydrologic Soil Group (HSG) classification

Y/N NA	Notes	2.2.3. Existing Watershed Drainage Area Map
		Existing drainage areas (in acres) serving each outfall, approximate flow directions, and names of receiving waters
		Location and identification of any existing buildings, structures or development on the site



Y/N NA	Notes	2.2.4. Proposed Watershed Drainage Area Map
		Proposed drainage areas (in acres) serving each identified outfall, approximate flow directions, and names of receiving waters
		Location and identification of any proposed buildings, structures or development on the site

Y/N NA	Notes	2.2.5. Erosion Prevention and Sediment Control Plan Maps
		Phased EPSC plans for projects over 50 acres
		Initial land disturbance stage plan and final grading stage plan for site disturbances less than 5 acres (2 sheets)
		Minimum initial land disturbance stage plan, interim stage plan, and final grading stage plan for site disturbances 5 acres or greater (3 sheets)
		Topographic map with contour intervals of five (5) feet or less, showing proposed contours and slopes resulting from land disturbing activity (The scale at a minimal of one (1) inch equals one-hundred (100) feet). Map must extend 100 feet beyond the limits of the proposed development
		Location and identification of any proposed additional buildings, easements, utilities, roads, structures or development on the site
		Boundaries or limits of permitted area/area of disturbance, including areas necessary for installation of all utilities, grading, clearing and filling including any off-site locations <ul style="list-style-type: none"> ▪ A detail of the protections (e.g. caution fencing) to limit the disturbance
		Proposed dimensions of stormwater infrastructure and channels
		Areas not to be disturbed are clearly marked
		Outfall points clearly identified on plans
		2.2.5.1. Aquatic Resources
		Location and identification of the complete inventory of aquatic resources including any karst features, land depressions and sinkholes, intermittent and wet-weather streams, wetlands, and designated floodways or flood plains on or adjacent to the site (100' of project site or disturbed area). <ul style="list-style-type: none"> ▪ All sinkholes features must be labeled as "sinkhole"
		Location and identification of any anticipated aquatic resource alterations, or discharges to or remediation of sink holes
		Flood zones shown
		2.2.5.2. Karst and Tree Protection
		Removal of overburden in areas with karst features are minimized
		Existing healthy mature trees whose drip line canopy covers a karst feature are protected during grading. Removal of trees replaced in kind by trees in the same locale
		Reference to the requirement: all karst features exposed by cutting of overburden must be examined by a qualified licensed professional for appropriate mitigation procedures
		Areas of existing trees to be preserved and undisturbed are noted, differentiated from trees to be removed, and/or proposed trees to be replanted (shown to scale and diameter of areas noted). Individual tree diameters or tree species do not need to be identified, and a full landscape plan does not need to be submitted for this checklist.
		Tree protection measures identified, and the sequence of implementation included (Areas flagged to prevent disturbance during construction)
		2.2.5.3. Buffer Zones (Water Quality Buffer Zone WQBZ)



		Identify and outline the WQBZ within the project boundary with dimensions (areas to remain undisturbed must be easily identifiable and marked onsite) <ul style="list-style-type: none"> ▪ 30 foot average riparian buffer on perennial and intermittent streams (no less than 15 feet at any location) ▪ 60 if adjacent to Exceptional Waters or streams with unavailable parameters (no less than 30 feet at any location) ▪ 15 foot buffer on wet weather conveyances identified by the USACE as WOTUS
		Riparian buffers that will become permanent buffers post construction must be identified. See section 4.1 for design requirements
		Discharges to WQBZ are non-channelized and non-concentrated, and first treated by the construction site's sediment and erosion controls
		A detailed description of utility or other easements, restrictive covenants, prohibited activities, and allowed maintenance within the WQBZ
		2.2.5.4. Erosion Prevention and Sediment Control Measures (may be incorporated in narrative as appropriate)
		EPSCs designed for storm discharge associated with the two (2) year, twenty-four (24) hour design storm event as a minimum or a five (5) year (24) twenty-four hour storm event if the land disturbance activities are proposed along Exceptional Waters or stream with unavailable parameters impaired for siltation or habitat alteration
		Detailed drawings, location, size and layout of all proposed structural and non-structural EPSCs including a maintenance schedule for each
		Pre-construction vegetation shall not be disturbed more than 14 days prior to earth disturbing activities unless the area is subsequently temporarily or permanently stabilized
		EPSCs installed before earth moving begins
		Which permittee is responsible for implementation of which EPSCs
		Removal of trapped sediment from sediment controls at or before 50% design capacity
		Silt fence installed parallel to contours and not used in areas of concentrated flow
		Stockpiles and borrow pits are located and protected
		Construction access (entrance/exits) location(s) and detail provided
		Concrete washout location and detail provided if applicable
		Steep slopes adequately protected (35% grade or greater)
		Vegetation, EPSCs and other protective measures are repaired replaced or modified within 7 days
		2.2.5.4.1. Volume and velocity controls
		Specifies velocity dissipation devices at discharge locations and along the length of any outfall channel
		2.2.5.4.2. Diversions
		Diversions are provided to divert stormwater flows from undisturbed areas from running onto and within the disturbed area
		Dimensions of diversions provided to handle peak flow (to verify correct installation purposes only-calculations do not need to be submitted)
		Temporary rock check dams provided, and geotextile used under rocks
		Temporary diversion channels vegetated
		2.2.5.4.3. Sediment basins



		Drainage area map for each basin including runoff coefficients and basin volume calculations
		Hydrologic/hydraulic plans and specifications stamped and certified by PE or LA
		Sediment pond meeting 2-year, 24-hour storm, if outfall draining ≥ 10 disturbed and undisturbed acres through a common outfall (diverted runoff from undisturbed areas can be omitted from the volume calculation) <ul style="list-style-type: none"> ▪ Wet and dry sediment treatment storage ▪ Lower orifices sealed during construction, unsealed after site is stabilized ▪ marker installed signifying when sediment accumulation has reduced the wet storage volume by 50%
		Sediment pond meeting 5-year, 24-hour storm, if outfall draining ≥ 5 disturbed and undisturbed acres through a common outfall (if to Exceptional Waters or stream with unavailable parameters) (diverted runoff from undisturbed areas can be omitted from the volume calculation) <ul style="list-style-type: none"> ▪ Wet and dry sediment treatment storage ▪ Lower orifices sealed during construction, unsealed after site is stabilized ▪ Marker installed signifying when sediment accumulation has reduced the wet storage volume by 50%
		Sediment trap meeting 5-year, 24-hour storm, if outfall draining 3.5-4.9 disturbed and undisturbed acres (if to Exceptional Waters or stream with unavailable parameters) (diverted runoff from undisturbed areas can be omitted from the volume calculation) <ul style="list-style-type: none"> ▪ Marker installed signifying when sediment accumulation has reduced the wet storage volume by 50%
		2.2.5.4.4. Stabilization
		Location of areas planned for stabilization and description and timing of temporary and permanent measures
		Areas of completion stabilized within 14 days
		Steep slopes ($\geq 35\%$) stabilized no later than 7 days
		2:1 slopes or 3:1 cut or fill slopes (>30 ft tall) stabilized with erosion control matting/blanket with installation detail provided
		Swales/channels and stabilized with erosion-resistant lining
		Check dam rocks removed if applicable

3. Stormwater Control Measures (Pollutant Treatment)

3.1. SCM Design

3.1.1. Run-off Reduction

		Stormwater Control Measures (SCMs) are designed in combination or alone to infiltrate, evapotranspire, harvest and/or use, at a minimum, the first inch of every rainfall event preceded by seventy-two (72) hours of no measurable precipitation. This first inch of rainfall must be one-hundred percent (100%) managed with no discharge to surface waters. <ul style="list-style-type: none"> ▪ Details provided ▪ Location shown on map
		Copy of blank inspection letter determining permanent stormwater measures have been installed as per the design engineer specifications (inspected by PE or LA)
		Documentation submitted to claim re-development incentives if applicable



		Calculations for 1 inch Water Quality Treatment Volume (WQTV) by PE or LA
		Drivable access to each SCM for maintenance/inspections (shown on map)
		All SCMs in common plans of development must be located in a common area (e.g. not in private residential lot)
		3.1.1.1. Pollutant Removal
		For projects that cannot meet 100% of the runoff reduction requirements
		Geotechnical report results or other applicable report, and description from the design engineer if runoff reduction limitations are present on site (pre-existing soil contamination, karst features, potential for pollutants to enter groundwater, soil restriction, etc.)
		Is the remainder of rainfall treated prior to discharge with a technology documented to remove 80% total suspended solids?
		Calculations have been submitted by PE or LA <ul style="list-style-type: none"> ▪ Treatment volume (1 inch WQTV) ▪ 80% TSS removal rate (calculations required if multiple devices are used)
		Drivable access to each SCM for maintenance/inspections (shown on map)
		All SCMs in subdivisions must be located in a common area (e.g. not in private residential lot)
		3.1.1.1.1. Proprietary BMPs
		Sized appropriately for treatment and bypass
		Documentation of third party TSS Removal rates conducted by the New Jersey Comprehensive Assessment Tool (NJCAT) or equivalent

3.2. SCM Maintenance and Repair

Y/N NA	Notes	3.2.1. Maintenance and Repair Plan Required if installing Stormwater Control Measures (Pollutant Treatment)
		Approved Inspection and Maintenance Agreement for Private Stormwater Management Facilities form for each permanent stormwater management facility submitted
		Maintenance and Repair Plan for each permanent stormwater management facility submitted and meets City requirements <ul style="list-style-type: none"> ▪ Blank copy of annual inspection report ▪ Blank copy of comprehensive inspection report ▪ Maintenance schedule and inspection checklist items ▪ Landscape plan if applicable

4. Permanent Riparian Buffers

4.1. Permanent Riparian Buffer Design

Y/N NA	Notes	4.1.1. Permanent Riparian Buffer Requirements
		Drainage areas less than 1 square mile have 30 ft minimum buffer Drainage areas greater than 1 square mile have 60 ft minimum buffer <ul style="list-style-type: none"> ▪ 60 ft minimum can be averaged as long as no measureable location is less than 30 ft OR WQBZ will become permanent buffers after construction
		Permanent buffers must be included on the final plat and identified on the construction plans