

Checklist summary for use with Site Planning and Design Procedure

SITE ANALYSIS	BACKGROUND SITE CONDITIONS
<p>Background Site Factors</p> <p><i>Describe hydrologic context and other natural elements</i></p> <ul style="list-style-type: none"> Chapter 93 stream use designation? <ul style="list-style-type: none"> Special Protection Waters (EV, HQ)? Fishery / Aquatic Life Use (WWF, CWF, TSF)? Any Chapter 303d/impaired stream listing classifications? Aquatic biota sampling? Existing water quality sensitivities downstream (water supply source?)? Location of any known downstream flooding? Includes any Special Areas? <ul style="list-style-type: none"> Such as Previously Mined AMD/AML areas? Brownfields? Source Water Protection areas Urban Areas? Carbonate/Limestone? Slide Prone Areas Other <p>Site Factors Inventory</p> <p><i>Describe the size and shape of the site</i></p> <ul style="list-style-type: none"> Special constraints/opportunities? Special site border conditions and adjacent uses? <p><i>Describe the existing developed features of the site, if any</i></p> <ul style="list-style-type: none"> Existing structures/improvements, structures to be preserved? Existing cover/uses? Existing impervious areas? Existing pervious maintained areas? Existing public sewer and water? Existing storm drainage systems at/adjacent to site? Existing wastewater, water systems onsite? <p><i>Describe important natural features of site</i></p> <ul style="list-style-type: none"> Existing hydrology (drainage swales, intermittent, perennial)? Existing topography, contours, subbasins? Soil series found on site and their Hydrologic Soil Group ratings? Areas of vegetation (trees, scrub, shrub)? Special Value Areas? <ul style="list-style-type: none"> Wetlands, hydric soils? Floodplains/alluvial soils? High quality woodlands, other woodlands and vegetation? Riparian buffers? Naturally vegetated swales/drainageways? Sensitive Areas? <ul style="list-style-type: none"> Steep slopes? Special geologic conditions (limestone?)? Shallow bedrock (less than 2ft)? High water table (less than 2ft)? PNDI areas or species? <p>Site Factors Analysis</p> <p><i>Characterize the constraint-zones at site</i></p> <ul style="list-style-type: none"> Avoid development on or near special and sensitive natural features <p><i>Characterize the opportunity-zones at site</i></p> <ul style="list-style-type: none"> Location of well-draining soils Location and quality of existing vegetation Has a Potential Development Area been defined? Does building program fit the constraints and opportunities of natural features? 	

MUNICIPAL INPUTS	BACKGROUND SITE CONDITIONS
<p><i>Township Comprehensive Plan and Zoning guidance</i> Guidance in Comprehensive Plan? Existing Zoning District? Total number of units allowed? Type of units? Density of units? Any allowable options?</p> <p><i>Township SLDO guidance and options</i> Performance standards for neo-traditional, village, hamlet planning? Reduce building setbacks? Curbs required? Street width, parking requirements, other impervious requirements? Cut requirements? Grading requirements? Landscaping requirements?</p> <p><i>Township SLDO/stormwater requirements</i> Peak rate and design storms? Total runoff volume? Water quality provisions? Methodological requirements? Maintenance requirements?</p> <p><i>Is applicant submission complete? Fully responsive to municipal zoning/SLDO requirements?</i></p> <p><i>Are municipal zoning/SLDO requirements inadequate?</i></p> <p><i>Is useful interaction at sketch plan or even pre-sketch plan phases occurring?</i></p>	
SITE DESIGN: NON-STRUCTURAL BMPs	DESIGN PHASE 1: PREVENTIVE
<p>Lot Concentration and Clustering <i>Reduce individual lot size?</i> <i>Concentrate/cluster uses and lots?</i> <i>Configure lots to avoid critical natural areas ?</i> <i>Configure lots to take advantage of effective mitigative stormwater practices?</i> <i>Orient built structures to fit natural topography?</i> <i>Minimize site disturbance (excavation / grading) at site?</i> <i>Minimize site disturbance (excavation / grading) for each lot?</i></p> <p>Minimum Disturbance/Maintenance <i>Define disturbance zones for site?</i> Protect maximum total site area from development disturbance? Protect naturally sensitive and special areas from disturbance? <i>Minimize total site compaction?</i> <i>Maximize zones of open space and greenways?</i> <i>Consider re-forestation and re-vegetation opportunities?</i></p> <p>Impervious Coverage Reduction <i>Reduce road widths? Lengths?</i> <i>Utilize turnarounds? Cul-de-sacs with vegetated islands?</i> <i>Reduce driveway length and width?</i> <i>Reduce parking ratios?</i> <i>Reduce parking sizes?</i> <i>Examine potential for shared parking?</i> <i>Utilize porous surfaces for applicable parking features (overflow)?</i> <i>Design sidewalks for single-side street movement?</i></p> <p>Disconnect/Distribute/Decentralize <i>Rooftop disconnection?</i> Existing downgradient yard area opportunities? Existing downgradient vegetated areas/woods? <i>Disconnection from storm sewers/street gutters?</i> Front/side yard opportunities? Space for vegetated swales, rain gardens, etc.?</p> <p>Source Control <i>Provisions for street sweeping? Other?</i></p>	

SITE DESIGN: STRUCTURAL BMPs	DESIGN PHASE 1: MITIGATIVE
<p>Volume/Peak Rate Through Infiltration <i>Porous Pavement with Infiltration Beds?</i> <i>Infiltration Basins?</i> <i>Infiltration Trenches?</i> <i>Rain Garden/Bioretention?</i> <i>Dry Wells/Seepage Pits?</i> <i>Vegetated Swales?</i> <i>Vegetated Filter Strips?</i> <i>Infiltration Berm/Retentive Grading?</i></p> <p>Volume/Peak Rate Reduction <i>Vegetated Rooftops?</i> Capture & Reuse: Cisterns? Rain Barrels? Other?</p> <p>Runoff Quality/Peak Rate Reduction <i>Constructed wetland?</i> <i>Wet pond/retention basin?</i> <i>Dry extended detention basin?</i> Water quality filters: Constructed and Other Sand and sand/peat? Multi-chamber catch basins and inlets? Other types?</p> <p>Other <i>Level Spreaders?</i> <i>Special Detention Storage: Parking Lots, Other</i></p> <p>Site Restoration for Stormwater <i>Riparian Buffer Restoration?</i> <i>Landscape Restoration</i> <i>Soil Amendment/Restoration</i></p> <p>Protocols <i>Soil Testing</i> <i>Site Infiltration</i></p>	
STORMWATER METHODOLOGY AND CALCULATIONS	SOTRMWATER CALCULATIONS
<p>Iterative Process Occurring Throughout Planning and Design Practices to Max out Non-Structural and Structural Practices Use acceptable methods, such as Soil Cover Complex Method (TR-55) for calculations Do not use Weighted Curve Numbers!</p> <p>Strive to: Minimize the pre to post development increase in Curve Numbers Maximize post-development Time of Concentration Assume "conservative" pre-development cover conditions (i.e., Curve Numbers) such as "Meadow Good" or "Woods" for all pre-development pervious areas? Respect natural sub-areas in the design and engineering calculations</p> <p>Strive To Achieve Standards of Comprehensive Stormwater Management No increase in volume of runoff, pre to post development, for up to the 2-yr storm No reduction in total volume of recharge, for up to the 2-yr storm No increase in peak rate of runoff, small to large storms No increase in pollutant loading</p>	
DEVELOP COMPREHENSIVE STORMWATER MANAGEMENT PLAN	PLAN
<p>Has There Been Thorough Approach To Use of Both Non-Structural and Structural BMP's? <i>If not, what non-structurals and structurals might be used?</i> <i>Should the building program be modified?</i></p> <p>What Related Benefits Are Being Achieved Through The Use of BMPs?</p>	