

TOWN OF SUTTON CONSERVATION COMMISSION

COMPREHENSIVE CHECKLIST FOR REVIEWING PUBLIC HEARING INFORMATION

Project name _____ **Applicant Name** _____

Reviewing Commissioner(s) Name _____ **Date of Review** _____

Notice of Intent and Supplemental Information

- _____ All appropriate permits obtained or applied for
- _____ Work completion schedule
- _____ USGS topographic map
- _____ FEMA flood plain map

Base map(s)—existing site conditions

- _____ North arrow
- _____ scale
- _____ key or legend
- _____ property identification
- _____ abutters identified and notified
- _____ datum base
- _____ contours
- _____ contour interval
- _____ drainage divides/watershed clearly defined
- _____ benchmarks
- _____ location of roadways, cart paths, stonewalls
- _____ location of site in watershed
- _____ location of existing water bodies
- _____ location of 100 and 200 foot buffers for all resource areas with lines in color
- _____ location of 10-year and 100-year flood elevations for existing water bodies
- _____ location and boundaries of resource areas
- _____ location of high water mark for rivers and streams
- _____ method of determining high water mark
- _____ perennial or intermittent stream designation
- _____ surveyors stamp
- _____ engineers stamp and date
- _____ rights-of-way and easements
- _____ utilities (above- and below-ground)
- _____ septic systems, cesspools, active or abandoned wells
- _____ wells
- _____ all structures shown
- _____ aquifers

Soils map and report

- _____ SCS soils map
- _____ hydrologic classification of soils
- _____ location of soil probes, test pits, and borings
- _____ soil logs, soil profiles, depth of soil horizons
- _____ thickness of wetland soils
- _____ depth to water table (with dates of measurement)
- _____ contours of water table
- _____ areas of ledge

Final site plans (should show all proposed changes)

- _____ final site plan reviewed
- _____ final site plan approved
- _____ proposed cut or dredge areas
- _____ proposed fill
- _____ proposed contours (include all grading)
- _____ proposed retention/detention areas
- _____ existing impervious areas
- _____ proposed impervious areas
- _____ proposed stream channelization, culverts, or piping with sizes and invert, outvert elevations
- _____ changes in drainage areas clearly identified
- _____ site drainage plan before
- _____ site drainage plan after
- _____ location and elevation of proposed structures
- _____ location of proposed wells
- _____ landscaping details
- _____ proposed resource area impediments
- _____ proposed title 5 compliance
- _____ stamped and dated by registered P.E.
- _____ expansion areas and pipe locations and sizes shown
- _____ cross-section of stream alterations
- _____ stream banks to be riprapped
- _____ engineers and/or registered Surveyor's stamp and date
- _____ proposed blasting area clearly identified
- _____ limits of work shown

Vegetation/land use map

- _____ forest
- _____ cultivated land
- _____ pasture
- _____ lawns
- _____ impervious areas
- _____ wetlands
- _____ perennial river/stream
- _____ intermittent river/stream
- _____ BVW
- _____ Pond
- _____ lake
- _____ vernal pool
- _____ other resource area
- _____ gravel pits

Hydrologic information

Rational Method for stormwater runoff from roadways and paved areas

- _____ are assumptions met? (**provide text**)
- _____ accurate delineation of drainage basins
- _____ accurate calculation of drainage basin area
- _____ soils and land use information before and after
- _____ C factors for different storm probabilities
- _____ time of concentration before and after
- _____ overland flows and stream velocities used for time of concentration calculation
- _____ charts used in determining infiltration
- _____ appropriate storm intensity calculations
- _____ chart used for determining (I) rainfall intensity
- _____ modifications for post-project conditions
- _____ peak flows

SCS TR-55 or TR-20 method for determining site runoff

- _____ accurate delineation of drainage basins
- _____ accurate calculation of basin area
- _____ soils maps
- _____ vegetation/land use maps
- _____ area of each soils-vegetation type
- _____ correction for ponding
- _____ correction for connected impervious area
- _____ correction for channel modification
- _____ correction for antecedent moisture conditions
- _____ proper curve number (CN) for each soil-cover type
- _____ proper composite curve number
- _____ appropriate 24-hour storm values
- _____ flow paths for time of concentration calculations
- _____ time of concentration
- _____ sheet flow no more than 50 feet segments
- _____ appropriate roughness coefficients
- _____ shallow concentrated flow length, slope, and velocity
- _____ correct channel flow
- _____ correct composite (Tc) time coefficient calculation
- _____ runoff depth and volume
- _____ method of determining peak flow rate
- _____ if Graphical Method used, are assumptions met? (provide text)
- _____ pre- and post-project calculations

Detention/retention areas

- _____ derivation of time of concentration by overland flow
- _____ area draining into retention/detention basin
- _____ inflow/outflow hydrograph
- _____ information for different storm probabilities, 1, 2, 5, 10, 25, 50, 100, year storms
- _____ is flood storage capacity adequate? (provide text)
- _____ include both conveyance system--storm drains, catch basins, etc.--and detention/ retention basins, forebays, swales
- _____ length of time before sediment load will significantly reduce the basin capacity
- _____ if detention/retention is to be provided by an existing wetland, area to be flooded and depth and duration of flooding
- _____ ability of soils to support weight of structure
- _____ overflow structure for extreme storm events
- _____ details of groundwater recharge wicks

Backwater analysis

_____ Flow velocities in pipes, channels, and discharge points

_____ velocity dissipater calculations

_____ operations and maintenance plan



Information on water quality (concentrations and loadings)

pre-project	post-project	
_____	_____	sediment
_____	_____	increase in sediment load
	_____	_____ how much
	_____	_____ timing
_____	_____	nutrients (phosphate, nitrogen compounds)
_____	_____	increase in nutrient load
	_____	_____ how much
	_____	_____ timing
_____	_____	road salt
_____	_____	petroleum products and byproducts
_____	_____	floating materials
_____	_____	coliform bacteria and other microbes
_____	_____	oxygen-demanding substances
_____	_____	heat
_____	_____	heavy metals
_____	_____	toxic materials
_____	_____	iron compounds
_____	_____	herbicides
_____	_____	algaeicides
_____	_____	pesticides
_____	_____	fertilizer
_____	_____	water quality monitoring schedule and procedures (provide text)

Alternatives Analysis

_____	Assessment of alternative locations, routes, construction
_____	measures, and project designs that would avoid
	wetland resource area alterations
_____	Information on engineering and design
_____	measures to minimize wetland alterations
	that are unavoidable

Mitigation: Wetlands replication plans

Existing wetlands	Proposed wetlands	
_____	_____	wetland delineation by qualified Wetland Scientist
_____	_____	area calculations in square feet
_____	_____	location in relation to bordering waterbody
_____	_____	if vernal pool, in relation to migration routes and surrounding habitat
		(replacement vernal pools must be in close proximity to original)
_____	_____	elevations relative to known datum
_____	_____	cross-sections as needed to understand surface and subsurface hydrology, topography,
		soils types and horizons
_____	_____	test pits or soil borings logs (information should be on cross-sections, above)
_____	_____	soil chemistry as appropriate
_____	_____	seasonal high groundwater elevations
_____	_____	seasonal low groundwater elevations
_____	_____	perched groundwater conditions
_____	_____	surface water flow patterns, timing, and rates
_____	_____	water quality
_____	_____	wetland plant species
_____	_____	plant community structure
_____	_____	wetland plant distributions
_____	_____	soil excavation and stockpiling procedure
_____	_____	re-vegetation procedure
_____	_____	construction schedule and sequence
_____	_____	post-construction monitoring procedures

Where appropriate, have the effects on wetland resource area characteristics contributing to each statutory interest been addressed?

Groundwater Supply

- _____ quantity
- _____ quality
- _____ level
- _____ gradient
- _____ recharge
- _____ discharge

Drinking Water Supply--Public and Private

- _____ quantity/availability
- _____ quality

Flood Control

- _____ retention
- _____ detention
- _____ bank storage and interflow
- _____ barrier protection
- _____ erosion

Storm Damage Prevention

- _____ detention
- _____ dissipation
- _____ stabilization
- _____ infiltration

Prevention of Pollution

- _____ living filter complex
- _____ water flow patterns and residence time
- _____ increased pollutant loads
- _____ release of dissolved and suspended materials

Fisheries

- _____ fish
- _____ food organisms
- _____ prevention of contamination
- _____ spawning areas
- _____ habitat

Land Containing Shellfish

- _____ shellfish beds
- _____ water quality
- _____ sediment
- _____ water circulation food

Wildlife Habitat

- _____ plant community composition
- _____ plant community structure (heights, ages, dispersion)
- _____ hydrologic regime
- _____ soil composition
- _____ soil structure
- _____ topography
- _____ water quality
- _____ vernal pool habitat
- _____ rare species habitat

Site Visit Information

- commissioners staff present
- applicant present
- agent present
- engineer/ specialist present
- abutters
- resource type identified
- bank
- land under waterbody
- land subject to flooding
- vernal pool
- BVW
- Riverfront area
- perennial stream
- intermittent stream
- water body
- limited project
- resource boundaries identified
- observations

potential solutions: _____

actions required: _____

unresolved issues: _____

<input type="checkbox"/> <u>additional information to be provided</u>	<u>date due</u>	<u>by whom</u>
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