

# ENVIRONMENTAL PERMIT PLAN CHECKLIST

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**\*\*\*This list is not to be construed as a final comprehensive list, only a guidance document.**

- Title sheet.** Include Location maps, list of drawings, standard general notes, plan date.
- Wetland Limits** on all plan views (The points on the wetland line type point into the wetland).
- Ordinary High Water Line** - OHW (all plan and pertinent cross section and elevation views).
- Flow arrows** for both existing and proposed watercourses and drainage systems, including swales within the project limits.
- Invert elevations** for bridges and culverts. Invert elevations for drainage outlets are not required for inland sites but the proposed volumetric flow rate ( $Q_{max}$ ) and velocity ( $V_{max}$ ) the end of drainage runs needs to be included.
- FEMA floodplain lines.** 100 year flood limit, floodway (if present), and other pertinent flood lines included on the plan and in the pertinent cross section and elevation views. (Refer to the 'Regulatory Floodplain Delineation 5/2016 guidance document')
- Permanent and temporary wetland impacts.** Impact areas need to be graphically shown with temporary and permanent impacts clearly differentiated. A table should be included to quantify these impacts. Impacts to wetlands and watercourses (OHW) should be quantified by area. Layout an area that the Contractor will be restricted to, all areas located within wetlands or watercourses will be counted as an impact area. These are not necessarily the same as ROW acquisition lines. Sufficient room should be provided to perform the work, but disturbance to wetland resources need to be minimized to the extent feasible.
- Permanent and temporary floodplain impacts.** Impact areas need to be graphically shown with temporary and permanent impacts clearly differentiated. Impacts to floodplains should be quantified by volume. A table should be included to quantify these impacts. (Refer to wetland impact section regarding minimization)
- Worksite access** is to be shown. Staging plans should depict access roads as they relate to regulated areas. Temporary fill placed for an access road in wetlands should always be separated from wetland subgrade with filter fabric and be removed at the completion of construction. Include a detail for this operation if impact is being considered temporary. Locations of any temporary barges/work floats should also be depicted.
  - Depict how access roads will be treated after construction. The Designer should verify with District Maintenance if an access road is to be left in place. If the road is permanent, it should be designed as such, and details provided on the plans.
  - For long access roads, it may provide insight to a regulatory reviewer to show a small scale view of the entire length of the access road in relation to regulated areas, and only focus detail on the actual impact locations.
- Stormwater design.** Should be in conformance with the 2004 Connecticut Stormwater Quality Manual to the extent possible. The design shall be in accordance with the DOT Drainage Manual (unless otherwise determined by H&D).
- Water Handling.** Specify an elevation for top of temporary water handling structures. A hydraulic table should be included detailing the pertinent hydraulic data and elevations based on the design storms.
  - Specify size of temporary gravity bypass pipe, if used, or minimum channel width to maintain flow conveyance through the site between cofferdams.
  - For handling of the stream itself under a pumping scenario, the pump, pipe/hose, and outlet approximate locations need to be shown. Ensure proper outlet control as may be necessary for pump discharges.
- Show approximate location of **dewatering basins** (upstream and downstream)
  - For handling of 'dirty water', i.e. from the work area, you do not need to show pump and pipe/hose locations, only an approximate location of the basin(s) must be shown. Basin shall always be located outside of wetlands and placed outside of floodplain/floodway areas to the extent possible.

- Dewatering/water handling is not required for the installation of fisheries enhancements (rock vanes, weir's, vortex, rootwads, etc). These items are to be installed under flowing conditions, and at the direction of DEEP Fisheries Division staff.
  - Stormwater "aka clean runoff" within the project limits should be temporarily handled as necessary to carry stormwater flows past the work area to prevent the mixing of clean off-site generated runoff with sediment laden work area waters.
- Staging.** Provide schematic staging plan(s) and suggested sequence of construction related to work in regulated areas.
- Staging and Water Handling can be shown on same plan(s)
- E&S Controls.** Detail sheets are not needed unless the controls are a-typical, engineered, or are different from the standards in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control Manual (as amended). SCS controls need to be shown at the limits of all fill areas.
- All materials proposed for E&S shall be from the Department's approved products list
- Slope protection and permanent stabilization details.** Include plantings, turf, erosion control matting (biodegradable whenever possible), riprap, etc. where they will be used. Show location and call out type.
- Details for fisheries or other wildlife enhancements** (include note 'to be directed in the field by DEEP/OEP staff' as appropriate).
- Wildlife shelf for bridges.** When incorporating a wildlife shelf to meet ACOE crossing criteria, clearly call out wildlife shelf and specify material to be utilized. Show elevation and dimension(s) on section/elevation plans.
- Natural streambed material/supplemental streambed channel material** Depict where material is being placed to topdress riprap or disturbed areas. On elevation plans, specify depth and call out top elevation on banks to which it should be placed (typically the 2 year storm elevation).
- Planting plan & tables** for impacted/disturbed wetland/buffer areas, especially along watercourses. The wetland rating each species chosen should be included in this table. Seed mixes, where used, should be called out on the plans.
- Invasive species control plans must be prepared for all USACE PCN permits.
  - Wood chip mulch should not be used within the limits of inland wetlands or below the Coastal Jurisdiction Line (CJL).
  - Do not place plantings under overhead utilities, and place them outside the clear zone.

**Additional Details Specific to Coastal Sites/Navigable Waters**

- Ebb and Flood flow arrows** on tidal waters as well as watercourse name.
- Depict **Coastal Jurisdiction Line (CJL), High Tide Line (HTL), Mean High Water (MHW) elevation, Mean Low Water (MLW) elevation** (plan and pertinent profile views). Specify datum utilized (NAVD 88 or NGVD 29) and be consistent.
- Plans for Coast Guard Permits need to be in NAVD88.
- Limits of **Navigational channels** and existing/temporary/proposed horizontal and vertical clearances.
- Depict **limits of vegetated tidal wetlands** (this comes from the wetland scientist as a field sketch or field flagging, in addition to standard wetlands delineation). Types of vegetative cover must be included (in accordance with CGS 22a-29(2)). Areas within 1ft above the CJL should be evaluated to determine if they "are capable of" supporting tidal wetland vegetation.
- Locations of **Barges & Moorings & Floats** as well as access for barges/moorings.
- Locations of **Temporary & Permanent Utility Crossings** over navigable waterways.
- Mitigation Plans** as may be required by the project.
- Invert elevations** must be shown for all drainage outfalls within the CJL.