

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE ENGINEERING NOTEKEEPING**

**POND
CODE 378**

EMBANKMENT POND

Hazard Classification

- A) Record the following hazard classification information:
- 1) Using the hazard classification data sheet (Form NC-ENG-34), evaluate the proposed impoundment for potential downstream hazards. Retain the data sheet as a permanent part of the design records for the pond. In addition, record the hazard class in the engineering field book.

For inventory size dams, a potential impact area study shall be made in accordance with NEM 520.28.
 - 2) Make a re-evaluation of the hazard classification prior to construction for all ponds where construction begins one year or more after the initial evaluation was made. Record re-evaluation on Form NC-ENG-34 and the engineering field book.

Planning and Design Survey

- A) Record the following information on Form NC-ENG-13:
- 1) Hazard classification of the proposed pond.
 - 2) If construction of the pond requires a NC Dam Safety permit, place the following statement on the plan: "Before beginning construction obtain a permit from the North Carolina Department of Environment and Natural Resources."
 - 3) A statement that the plan is void until re-evaluation of flood plain for safety hazards if construction begins later than one year after the date of the plan.

Design Survey and Construction Layout

- A) Obtain and record the following information in a standard engineering field book. This is the minimum design survey and construction layout required for a pond. For large ponds or special conditions, additional information may be needed.
- 1) Location description and sketch.
 - 2) Location and description of benchmark.
 - 3) Profile on centerline of dam site.
 - 4) Profile on centerline of auxiliary spillway including inlet section, level section, and outlet section when needed for spillway design.
 - 5) Profile on centerline of pipe spillway, if needed for design.

- 6) Elevation of old channel bottom or natural low area at the downstream toe of the dam.
 - 7) Topographic information downstream of dam for use in design of stilling basin, if needed.
 - 8) Determination of pool areas and volumes.
- B) Record the following soils investigation on Form SCS-538:
- 1) Record the foundation and cutoff trench borings.
 - 2) Record the borrow and auxiliary spillway excavation borings.
- C) Provide the following information and slope stakes as needed by the contractor:
- 1) Embankment side slopes and top width.
 - 2) Cutoff trench depth and minimum cut slope.
 - 3) Elevation and location of the pipe spillway, drain device, and seepage control measures (if required).
 - 4) Auxiliary spillway side slopes and bottom width.

Construction Check

- A) Make and record the following construction check items.
- 1) Record profile and cross-section of foundation cutoff trench.
 - 2) Profile along centerline of top of completed embankment.
 - 3) Cross-section of completed embankment to determine top width and side slopes.
 - 4) Profile along centerline of constructed part of auxiliary spillway.
 - 5) Cross-section at crest of auxiliary spillway.
 - 6) Elevation of crest of principal spillway.
 - 7) Statement concerning adequacy of trash guards for all pipes.
 - 8) Dimensions and kind of material used for principal spillway and other pipe conduits.
 - 9) Data on seepage control measures. Include type, number and materials.
 - 10) Comparison of actual pool area with areas used for design.
- B) Record a statement concerning adequacy of embankment and spillway seeding.
- C) Record the date and signature of person making construction check.

As-Builts and Certification

- A) Develop as-built documentation and retain permanently.
- B) If applicable, submit the Dam Inventory Form to the State Conservation Engineer.
- C) Record a statement that the installation meets the requirements of the plans and specifications by a person with proper Construction Job Approval Authority.