

Colorado Practice Documentation Requirements Checklist for 378 – Pond (Embankment)

Minimum documentation requirements for this practice are outlined below. Documentation for associated practices or system components shall follow the appropriate practice documentation requirements for those practices or components. Some items may not be applicable in all cases; mark "N/A" in the check box if such is the case.

Participant Name:	Address:
Project Name & Location:	

✓	By:	Date:
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RESOURCE INVENTORY & DESIGN INVESTIGATIONS

Purpose and objectives of practice clearly identified.			
Soils identified (soil map, description, properties, etc.). Geologic investigation as required for Group I or Group II dam sites as outlined in NEM Part 531, Subpart 531B, Dam site investigations.			
Resistivity readings of soils for corrosion potential, if necessary.			
Location of underground utilities.			
NRCS-CPA-52, Env. Effects Worksheet, & CO-SSC-1, Cult. Res. Survey Form, completed.			
Right of way easements, utility clearances, SHPO clearance, and applicable State and Federal permits are obtained. Permit application made to the Colorado Division of Water Resources (DWR) for jurisdictional size dams or "Notice of Intent" filed with DWR for non-jurisdictional size dams.			
CO-ENG-13, Notice of Participant Responsibilities, has been reviewed with the cooperator, signed, and filed.			

SURVEY

Topographic or other type of survey of site in order to obtain the following information:			
<ul style="list-style-type: none"> • Profile along centerline of embankment and emergency spillway. 			
<ul style="list-style-type: none"> • Profile and alignment of principal spillway and other conduits far enough downstream to determine tailwater conditions and stability of outlet channel. 			
<ul style="list-style-type: none"> • Cross sections of dam and emergency spillway. 			
<ul style="list-style-type: none"> • Drainage area and basin topography to the extent needed for design. 			
Determine possible borrow areas.			
A sufficient number of temporary benchmarks placed so that horizontal and vertical control can be established throughout design, construction, and checkout of the structure.			

DESIGN

Engineering Job Class determined and noted.			
Log of soil investigations and any lab test results at centerline of dam and borrow area.			
Hydrologic computations.			
Determine need for principal spillway to protect downstream water rights.			
Hydraulic computations for principal spillway and emergency spillway.			
Stage-storage data.			
Structural design for non-standard plans.			
Quantity computations and cost estimate.			
Records indicating that NRCS obligations regarding State and Federal regulations have been met. Participant(s) have applied for all permits and cleared water rights issues.			

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Record of determination of hazard classification. (See NEM, 520.23).			
Design computations have been checked and approved by the appropriate person(s).			

PLANS AND SPECIFICATIONS

Construction drawings drawn on appropriately-sized standard drawing sheets. Include standard drawings as appropriate. Drawings and/or specifications to include the following:			
• Engineering Job Class.			
• Location map or description.			
• Plan, profile, and maximum cross section of embankment and emergency spillway.			
• Profile along centerline of principal spillway and conduit. (May be combined with embankment cross section.)			
• Stage-storage data and drainage area, if necessary.			
• Spillway hydraulics, stage-discharge curve, if necessary.			
• Structural layout and details as necessary, including principal spillway, conduits, anti-seep collars/drainage diaphragms, trash guards, etc.			
• Requirements for fencing, seeding, etc.			
• Borrow area indicated.			
• Table of quantities.			
• Fill material and compaction requirements, if not noted in specifications.			
• Construction notes and General notes as required.			
• Note on drawings to call the Utility Notification Center of Colorado (UNCC), 8-1-1 or 1-800-922-1987, prior to any excavation.			
Construction specifications prepared (Colorado FOTG Practice Specifications or other).			
Construction drawings and specifications have been checked and approved and drawings signed.			
O&M Plans prepared.			
Plans, specifications, and O&M plans have been reviewed with the cooperater.			
Preconstruction meeting with cooperater and contractor.			

CONSTRUCTION LAYOUT SURVEYS

Centerline and slope stakes for the pond embankment and emergency spillway.			
Grade and alignment stakes for conduits and principal spillway.			
Slope stakes for cutoff trench and drains.			

COMPLIANCE CHECKS & FINAL DOCUMENTATION

Profile and cross sections of cutoff trench (accomplished during construction).			
Dimensions, number, and materials used for anti-seep collars (accomplished during construction).			
Dimensions and materials used for drainage diaphragm (accomplished during construction).			
Profile along centerline of completed embankment and emergency spillway (100 ft. maximum interval).			
Cross section of embankment and emergency spillway (minimum 1 each).			
Dimensions, elevations, materials of principal spillway and conduits.			
Size, type, and model of all valves, gates, and other appurtenances.			
Compaction test results or inspection observations recorded in tech. notes.			
Seeding and/or fencing noted as complete.			
UNCC (Utility Notification) ticket number has been recorded.			
Construction inspection reports recorded.			
Changes in design are noted and approved by the landowner and the designer, and proper engineering review/approval is obtained.			
“As-Built” plans prepared and filed (Required if significant changes in design occur during construction and for Job Class V and above). If no significant changes, mark original plans “As-Built”.			
Practice completion certified on CO-ENG-1, CO-ENG-12, or checkout notes.			
Progress reported.			