

STATEMENT OF WORK
Aquaculture Pond (397)
Kentucky

These deliverables apply to this individual practice. For other planned practice deliverables refer to those specific Statements of Work.

DESIGN

Deliverables:

1. Design documentation that will demonstrate that the criteria in NRCS practice standard have been met and are compatible with other planned and applied practices.
 - a. Practice purpose(s) as identified in the conservation plan
 - b. List of required permits to be obtained by the client
 - a. Compliance with NRCS national and state utility safety policy (NEM Part 503-Safety, Subpart A - Engineering Activities Affecting Utilities 503.00 through 503. 6) It is the client's responsibility to contact Kentucky811, Call 811 Before You Dig. See www.kentucky811.org for more information.
 - c. Practice standard criteria related computations and analyses to develop plans and specifications including but not limited to:
 - i. Geology and Soil Mechanics (NEM Subpart 531a)
 - ii. Hydrology/Hydraulics and Appurtenance design
 - iii. Structural
 - iv. Vegetation
 - v. Environmental Considerations
 - vi. Safety Considerations (NEM Part 503-Safety, Subpart A, 503.10 through 503.12)
2. Written plans and specifications including sketches and drawings shall be provided to the client that adequately describes the requirements to install the practice and obtain necessary permits.
3. Design Report and Inspection Plan as appropriate (NEM Part 511, Subpart B Documentation, 511.11 and Part 512, Subpart D Quality Assurance Activities, 512.30 through 512.32).
4. Operation and Maintenance Plan
5. Certification that the design meets practice standard criteria and comply with applicable laws and regulations (NEM Subpart A, 505.03 (a) (3)).
6. Design modifications during installation as required.

Note: Design of practice will be in compliance with practice standard and applicable criteria for the appropriate purpose(s). Practice specification will include the information listed in the "Plans and Specifications" and "Operation and Maintenance" section of the conservation practice standard. The design will document the client's decisions using narrative and/or jobsheet.

INSTALLATION

Deliverables

1. Pre Installation conference with client and contractor.
2. Verification that client has obtained required permits.
3. Staking and layout according to plans and specifications including applicable layout notes.
4. Installation inspection (according to inspection plan as appropriate).
 - a. Actual materials used (Part 512, Subchapter D Quality Assurance Activities, 512.33)
 - b. Inspection records
5. Facilitate and implement required design modifications with client and original designer
6. Advise client/NRCS on compliance issues with all federal, state, tribal, and local laws, regulations and NRCS policies during installation.
7. Certification that the installation process and materials meets design and permit requirements.

Note: Provide written documentation of any modification of the approved design. Certify that the modification meets practice standard on appropriate NRCS form and/or letter of certification as applicable. At a minimum, documentation will include quantities and amounts. The location of the applied practice will be identified on the conservation plan map for non-structural practices. As-built

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design modifications for structural practices will be prepared in accordance with the requirements of the applicable standards the modifications fall under.

CHECK OUT

Deliverables

1. As-Built documentation.
 - a. Extent of practice units applied
 - b. Drawings
 - c. Final quantities
2. Certification that the installation meets NRCS standards and specifications and is in compliance with permits (NEM Subpart A, 505.03 (c) (1)).
3. Progress reporting.
4. Photo documentation recommended.

Note: Meet with client to review practice operation and maintenance. Certify the conservation practice has been installed according to practice design and specifications using a letter of certification or appropriate NRCS form.

SPECIAL REQUIREMENTS FOR COST SHARED PRACTICES

As noted in GM KY Supplement 450-407.12: Certifying Performance for Cost Sharing (June 2008)

A. All practices will be located and identified using Global Positioning Systems (GPS) unit. (See GM KY 450-407.12 for additional guidance.)

B. Practices receiving cost share assistance will be photo identified with no less than one before picture and no less than one after picture. (See GM KY 450-407.12 for additional guidance)

A quick link to the policy is: ftp://ftp-fc.sc.egov.usda.gov/KY/GM_Supplement_450.pdf

SUPPORTING DATA and DOCUMENTATION

Field Data and Survey Notes

Record on NRCS-ENG-28 and ENG-29 or other media. The following is a list of the minimum data needed:

1. Profile along centerline of structure.
2. Profile along centerline of principal spillway.
3. Profile along centerline of emergency spillway.
4. Survey of storage area to develop topography and storage volumes.
5. Soil investigation logs and notes.

Design Data

Record on appropriate engineering worksheets, forms, and drawings. The following is a list of the minimum required design data:

1. Determine pond class and list appropriate spillway design criteria, including map.
2. Determine peak runoff from the contributing area for the design storms selected, including topo map.
3. Develop a stage-storage/discharge curve for the site.
4. Determine the pipe spillway by storm routing using the procedure in the WinPond computer program; Chapter 11, EFH; Chapter 6, TR-55; or TR-20.
5. Design emergency spillway using EFH, Ch11.
6. Drawings should show the following as a minimum: profile along centerline of dam; profile along centerline of emergency spillway; cross section through dam at principal spillway; cross section through emergency spillway; plan view; and construction details & notes and soil logs.
7. Compute earth fill (if needed).
8. Special design feature details; aerators, fish management, outfall stabilization, etc.; structural details with design loadings, if applicable, should be shown on the drawings;
9. Record seeding plan on drawings or approved Job Sheets;

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10. A written Operation and Maintenance Plan;
11. Signature of someone with proper design Job Approval Authority.

Construction Check Data/As-built

Record on survey note paper, NRCS-ENG-28, ENG-29 or other media. Survey data for ponds will be plotted in red. All construction inspection visits shall be recorded on the CPA-6 or appropriate documentation forms or paper. The documentation shall include the date, who performed the inspection, specifics as to what was inspected, all alternatives discussed, and decisions made and by whom. The following is a list of the minimum data needed for As-Built:

1. A profile of the top of the dam.
2. A cross-section of the emergency spillway at the control section.
3. A profile along the centerline of the emergency spillway.
4. A profile along the centerline of the principal spillway extending at least 100 feet downstream of the fill.
5. The elevation of the principal spillway crest.
6. The elevation of the principal spillway conduit invert (inlet and outlet).
7. The diameter, length, thickness and type of material for the riser.
8. The diameter, length, and type of material for the conduit.
9. The size and type of anti-vortex and trash rack device and its elevations in relation to the principal spillway crest.
10. The number, size and location of the antiseep collars.
11. The diameter and size of any low stage orifices or drain pipes.
12. Show the length, width, and depth of contours of the pool area so that design volume can be verified.
13. Notes and measurements to show that any special design features were met.
14. Statement on seeding and fencing.
15. Notes on site clean up and disposal.
16. Sign and date check notes to include a statement by someone with appropriate job approval authority that practice meets or exceeds plans and specifications.

REFERENCES

- NRCS Field Office Technical Guide (eFOTG), Section IV, Conservation Practice Standard - Aquaculture Pond, 397
- NRCS National Engineering Manual (NEM).
- NRCS National Environmental Compliance Handbook
- NRCS Cultural Resources Handbook
- Kentucky State University Aquaculture <http://www.ksuaquaculture.org>
- Durborow, Bob, Kentucky State University Aquaculture Program. *Catfish Farming in Kentucky*. 2000.
- Kentucky Department of Fish and Wildlife (KDFWR), *A Management Guide for Ponds and Small Lakes in Kentucky*, Third Edition. 2004.