AL501.01(b)(3) Scope

District employees who are technically supervised by NRCS and not licensed to practice engineering in the State of Alabama may be given engineering job approval authority. The delegating engineer should confer with the state conservation engineer (SCE) prior to delegating this authority.

AL501.03(c)(1) Compliance of engineering work with laws and regulations.

Routine jobs designed by NRCS and by non-NRCS employees working as partners with NRCS normally do not need or require the plans to be sealed by a registered engineer. However, when sealing is required, the approving engineer may seal the plans. If the engineer is not licensed in Alabama and/or does not have the appropriate approval authority, arrangements must be made with the SCE prior to beginning the design.

Alabama law regulating the practice of engineering (Section 34-11-10) requires that drawings, plans, specifications, and estimates be prepared by and the construction executed under the direct supervision of a professional engineer for projects of public work that exceed $20,000. Therefore, for projects with a county or city unit of government sponsor in which NRCS designs and provides construction supervision and that exceed $20,000. A professional engineer must seal the plans and supervise the construction activities.

Engineering plans sealed by the engineer must be personally prepared by the engineer or prepared under the engineer's responsible supervision, direction, and control and be within the engineer's job approval authority.

All engineering drawings and specifications for WF-08, Flood Water Retarding Structures, will be approved by the SCE. Other project type drawings and specifications can be approved according to the delegated approval authority.

AL501.03(c)(2)

The SCE or other NRCS engineers registered as a Professional Engineer in Alabama are authorized to seal engineering jobs within their approval authority limits that require approval and sealing by regulatory agencies.

AL501.03(c)(3)

If a cooperating local organization for which NRCS is providing technical assistance is required to have plans prepared under the direct supervision of a registered professional engineer, the SCE or other NRCS engineer registered as a Professional Engineer in Alabama is authorized to seal engineering jobs within their approval authority limits.

AL501.04(a) Engineering job approval authority.

Alabama Engineering Job Approval Authority (See AL501.04(a) – Exhibit 1).

AL501.04(b)(2)

RESPONSIBILITIES

Line officers are responsible for planning and installing soil and water conservation practices within the framework of national and state policies and criteria. Assistants for field operations are administratively responsible for the technical adequacy of Service assistance in the planning and application of engineering practices within their region. District conservationists have similar responsibilities within their field office jurisdiction. Engineering job approval authorities will be delegated to qualified individuals to plan, design, and approve the installation of engineering practices. Qualified individuals may be an NRCS employee, district employee, volunteer (state, county, or other agency employee), or an employee of an organization under the direct technical supervision of NRCS.

Inventories and evaluations, designs, and construction of engineering practices will be approved by an authorized person with delegated approval authority for the job. Employees with engineering job approval authority should not hesitate to request assistance when complexities are encountered which exceed their expertise.

Any NRCS or non-NRCS employee operating under the supervision of an NRCS employee may survey, design, and prepare the engineering plans for jobs requiring approval at any level of job classification. However, final approval must be in accordance with delegated engineering job approval authority. Before committing resources, employees should consult with the person approving the engineering plan where there is any doubt that the person will approve the practice.

Construction inspection and/or approval of an installed engineering practice or job can be performed by an employee, volunteer or other with less than the required approval authority as long as the delegating, responsible engineer has the appropriate construction approval authority for the job.

All design documentation and plans are to be checked prior to construction and initialed by the checker in the space provided. The checker is responsible to ensure that all calculations, dimensions, lines, notes, drawing details, and specifications are correct [refer to 511.05(a)]. The cover sheet of the engineering plans shall be signed and dated by the person approving the plans.

The employee with approval authority will always check the designs, drawings and specifications, and be satisfied that the following requirements are met prior to approval:

1. The plan conforms to Service standards and policy.
2. Adequate field investigations have been made.
3. The layout is suitable.
4. Installations, if made in accordance with the plans and specifications, will function properly.

Prior to final design and layout of embankment ponds that are Class I or larger, form AL-ENG-27 or AL-ENG-27A [See AL501.04(b)(2) – Exhibit 2] must be signed by the landowner to ensure that certain requirements are going to be met by the landowner, contractor, and NRCS.

These applications include an agreement that an operation and maintenance plan [See AL501.04(b)(2) – Exhibit 3] will be developed and furnished with the design, drawings, and specifications.

DELEGATION

The SCE will delegate the engineering approval authority of all the resource engineers in grades GS-11 and above. The responsible or lead resource engineer will delegate engineering approval authority to employees, volunteers, and others within their assigned counties with the concurrence of the employee's supervisor.

The Alabama Engineering Job Approval Authority (AL-ENG-1) will be the form used to delegate engineering approval authority in the state. All planned and designed practices shall be classified according to Job Class in accordance with the form. The Job Class will be noted on the engineering drawing and/or in the field notes as appropriate. The classification for a given job will be based on the most restrictive element of the job.

All employees, volunteers, and others that are delegated approval authority shall be appraised on their level of proficiency and issued a copy of AL-ENG-1. Approval authorities shall be kept current by the delegating engineer [See 501.04(b)(5)]. Approval authority shall only be given to an individual on the practices the individual customarily works on, has ample experience of, and has a good working knowledge of.

The AL-ENG-1 will be prepared and distributed as follows:

Original maintained by the delegating engineer.
1 copy to the SCE.
1 copy to the assistant for field operations.
1 copy to the employee or volunteer.

The employee, volunteer, or other individual are to maintain a current copy of their AL-ENG-1 in the front of their Alabama Engineering Field (Design) Manual for Conservation Practices.

AL501.04(a) - Exhibit 1 – Alabama Engineering Job Approval Authority

ALABAMA ENGINEERING JOB APPROVAL AUTHORITY

NAME_____ **TITLE**_____ **GRADE**_____ **LOCATION**_____

DELEGATED BY_____ **TITLE**_____ **DATE**_____
(Responsible Engineer)

CONCURRED BY_____ **TITLE**_____ **DATE**_____
(Supervisor)

This form will be reviewed with the employee annually and revised as needed. If no significant changes are made, the following table will be used to indicate that the review has been made by the appropriate engineering personnel.

REVIEWED BY	TITLE	COMMENTS	DATE

PRACTICE NAME	PRAC. CODE	CONTROLLING FACTOR	UNITS	JOB CLASSES						MAX APPROVAL AUTHORITY		
				I	II	III	IV	V	VI	I&E	DSN	CST
Any Practice	---	Hazard potential as defined by Sec. 503 of NEM	Class	Low	Low	Low	Low	Low	Signifi-cant	I	I	I
Any Practice	---	Alter the visual resources of beaches and shorelines on oceans		None	None	None	None	None	All	I	I	I

DAMS AND STRUCTURES [1/]

PRACTICE NAME	PRAC. CODE	CONTROLLING FACTOR	UNITS	JOB CLASSES						MAX APPROVAL AUTHORITY		
				I	II	III	IV	V	VI	I&E	DSN	CST
Commercial Fishponds	397 [2/]	Box Culvert, Ar. Open	sq.ft.	None	4	8	12	All	All			
Dam	402 [2/]	Conduit (barrel)	in.	12	24	30	36	All	All			
Grade Stabilization Structure	410 [2/]	Conduit (siphon)	In.	4	8	12	16	All	All			
Irrigation Pit or Regulating Reservoir	552 [2/]	Drainage Area	ac.	160	320	640	1320	12,800	25,600			
		Effective Height	ft.	15	20	25	30	35	50			
Irrigation Storage Reservoir	436 [2/]	Embankment over active fault		None	None	None	None	None	None			
Pond	378 [2/]	Open Channel Spillway Flow	cfs.	150	300	1000	2000	All	All			
Sediment Basin	350 [2/]	Pipe Conduit Capacity	cfs.	25	75	125	200	All	All			
Structure for Water Control	587 [2/]	Storage x Effective Height	ac.ft.xft.	500	1000	2000	3000	All	All			
Fish Raceways or Tank	398	Concrete, Block, or Tank Surface Area	ac.	None	0.1	0.2	0.5	All	All			
		Earthen, Surface Area	ac.	None	0.1	0.5	2.0	All	All			
Pond Sealing or Lining - Flexible Membrane	521A	Perm. Pool Depth Area	ft. ac.	10 1/2	15 1	20 2	25 5	All All	All All			
Pond Sealing or Lining - Soil Dispersant	521B	Perm. Pool Depth Area	ft. ac.	10 2	15 4	20 8	25 10	All All	All All			
Pond Sealing or Lining - Bentonite	521C	Perm. Pool Depth Area	ft. ac.	10 2	15 4	20 8	25 10	All All	All All			

WASTE MANAGEMENT SYSTEMS

PRACTICE NAME	PRAC. CODE	CONTROLLING FACTOR	UNITS	JOB CLASSES						MAX APPROVAL AUTHORITY		
				I	II	III	IV	V	VI	I&E	DSN	CST
Animal Trails and Walkways	575	Surface Treatment	Kind	Earth	Earth	Earth	Gravel	All	All			
		Length	ft.	500	1000	2000	5000	All	All			
Composting Facility	317	Animal Units 3/	no.	100	250	500	1000	All	All			
Constructed Wetland	656	Animal Units 3/ Area	no. ac.	None None	60 0.3	120 0.5	600 1.0	All All	All All			
Incinerator	769	1000 Birds No. Sows	no.	60 100	120 200	250 500	500 1000	All All	All All			
Manure Transfer	634	Animal Units 3/	no.	None	120	300	600	All	All			
Closure of Waste Impoundments	360	Surface Area	ac.	None	1	2	5	All	All			
Waste Field Storage	749	Animal Units 3/	no.	None	All	All	All	All	All			
Waste Storage Facility	313	Storage Capacity	1000 cu.ft.	100	200	500	1000	2000	5000			
		Effective Height of Dam	ft.	15	20	25	30	All	All			
		Liquid or Slurry Design Cap., Animal Units 3/	no.	None	50	250	500	All	All			
		Wall Height Above Ground Below Ground	 ft. ft.	 None None	 6 6	 8 8	 12 8	 All All	 All All			
		Tank Span Above Ground Below Ground	 ft. ft.	 None None	 8 6	 12 10	 24 12	 All All	 All All			
		Tank, Silo Type (Preapproved)	no.	None	None	All	All	All	All			
		Dry Stack Animal Units 3/	no.	None	250	500	1000	All	All			
Waste Treatment Lagoon	359	Aerobic Surface Area	ac.	None	2	5	10	25	50			
		Anearobic Volume	1000 cu.ft.	None	200	500	1000	2000	5000			
		Effective Height of Dam	ft.	15	20	25	30	All	All			

WATER MANAGEMENT SYSTEMS

PRACTICE NAME	PRAC. CODE	CONTROLLING FACTOR	UNITS	JOB CLASSES						MAX APPROVAL AUTHORITY		
				I	II	III	IV	V	VI	I&E	DSN	CST
Agricultural Fuel Containment Facility	701	Fuel	gal.	100	300	660	1320	All	All			
Agrichemical Handling Facility	702	Secondary Containment	gal.	None	None	500	1000	All	All			
		Eave Height	ft.	None	10	14	All	All	All			
Anionic Polyacrylamide (PAM) Erosion Control	450	Area Treated	ac.	1	2	5	All	All	All			
Bedding	310	System Operating as Unit	ac.	20	40	All	All	All	All			
Diversion	362	Capacity	cfs	100	150	200	250	All	All			
Filter Strip	393	Area Protected	ac.	All	All	All	All	All	All			
Grassed Waterway	412	Capacity	cfs	100	150	200	250	All	All			
Lined Waterway or Outlet	468	Design Capacity	cfs	None	50	100	200	All	All			
Portable Agrichemical Mixing Station	703	Secondary Containment	gal.	None	10	25	50	All	All			
Roof Runoff Structure	558	Capacity	cfs	10	20	50	100	All	All			
Row Arrangement	557	Area of Field	ac	40	160	320	All	All	All			
Runoff Management System	570	Design Capacity	cfs	None	None	50	100	All	All			
Subsurface Drain	606	Diameter System Length	in. 1000 ft.	6 2.5	8 5	12 10	18 20	All All	All All			
Surface Drainage Field Ditch	607	Area of System	ac.	40	80	160	320	All	All			
Surface Drainage Main and Lateral	608	Design Capacity Velocity	 cfs fps	 50 4	 100 5	 200 6	 300 8	 1000 10	 2000 12			
Terraces	600	Area Protected	ac.	50	160	All	All	All	All			
Underground Outlet	620	Area Protected	ac.	10	20	40	80	All	All			
Water & Sediment Control Basin	638	Storage Height	ac.in. ft.	10 6	20 12	30 12	40 15	All All	All All			

WATER SUPPLY

PRACTICE NAME	PRAC. CODE	CONTROLLING FACTOR	UNITS	JOB CLASSES						MAX APPROVAL AUTHORITY		
				I	II	III	IV	V	VI	I&E	DSN	CST
Dry Hydrant	432	Pump Capacity	gpm	None	300	750	All	All	All			
		Water Source	Kind	River or non-fluct. lake	Pond or fluct. lake	Stream	All	All	All			
Pipeline	516	Pressure	psi	10	20	50	100	300	All			
Pumping Plant	533	Axial Flow Pump Capaciity	1000 gpm	5	8	10	20	50	100			
		Centrifugal and Turbine Pump Capacity	1000 gpm	None	1	2	2.5	3.5	5			
		Centrified Pump Static Head	ft.	None	100	200	250	350	500			
		Tubine Pump Static Head	ft.	None	150	300	400	500	1000			
Spring Development	574	Total Flow	gpm	5	15	50	100	All	All			
Water Well	642	Diameter	in.	2	4	6	8	All	All			
Watering Facility	614	Capacity	gal.	250	500	1000	2000	All	All			
Well Decommissioning	351	Type of Well		Dug	All	All	All	All	All			
		Depth	ft.	25	100	200	All	All	All			
		Karst Topography		no	no	no	no	yes	yes			
		Flowing Artesian		no	no	no	no	yes	yes			

STREAM CHANNEL

PRACTICE NAME	PRAC. CODE	CONTROLLING FACTOR	UNITS	JOB CLASSES						MAX APPROVAL AUTHORITY		
				I	II	III	IV	V	VI	I&E	DSN	CST
Clearing & Snagging	326	Length of Reach	1000 ft.	1	2	5	10	All	All			
Dike	356	Hazard-Height	class-ft.	None	III-3	III-6	III-9	III-All	II-All			
Land Clearing	460	Area Treated	ac.	80	160	320	All	All	All			
Open Channel	582	Design Capacity Velocity	 cfs fps	 None None	 150 4	 300 6	 500 8	 1000 10	 2000 12			
Spoil Spreading	572	Length of Ditch	1000 ft.	2.5	5	10	All	All	All			
Stream Channel Stabilization	584	Design Capacity Velocity	 cfs fps	 None None	 150 4	 300 6	 500 8	 1000 10	 2000 12			
Stream Crossing	578	Bankfull Capacity	cfs	50	100	200	500	All	All			
Streambank and Shoreline Protection [4/]	580	Bankfull Capacity	1000 cfs	0.2	0.5	1.0	2.5	5	20			
		Bankfull Velocity	fps	2	4	6	8	10	12			
		Water Height Above Shoreline	ft.	None	None	1	2	3	5			

IRRIGATION

PRACTICE NAME	PRAC. CODE	CONTROLLING FACTOR	UNITS	JOB CLASSES						MAX APPROVAL AUTHORITY		
				I	II	III	IV	V	VI	I&E	DSN	CST
Field Ditch	388	Design Capacity	cfs	5	10	25	All	All	All			
Land Leveling	464	Area	ac.	None	25	40	160	All	All			
System, Sprinkler	442	Capacity	ac.	None	40	160	320	All	All			
System, Surface and Subsurface	443	Capacity	ac.	None	40	160	320	All	All			
System, Microirrigation	441	Capacity	ac.	None	10	20	40	All	All			
Water Conveyance Pipe	430	Pipeline Capacity 50 psi <50 psi	 gpm gpm	 None None	 500 750	 1000 1500	 2000 3000	 3500 5000	 All All			
Water Management	449	Area Served	ac.	160	320	640	All	All	All			

LAND RECLAMATION

PRACTICE NAME	PRAC. CODE	CONTROLLING FACTOR	UNITS	JOB CLASSES						MAX APPROVAL AUTHORITY		
				I	II	III	IV	V	VI	I&E	DSN	CST
Fire Control	451	Area	ac.	None	None	None	None	1	All			
Highwall Treatment	456	Height With Seepage	ft.	10	15	20	25	35	75			
		Height Without Seepage	ft.	10	15	25	35	50	100			
Land Smoothing	466	Area Treated	ac.	5	20	40	80	All	All			
Land Reclamation, Landslide Treatment	453	Area	ac.	None	None	0.25	0.5	1	5			
		Depth	ft.	None	None	5	8	10	20			
Land Reconstruction, Abandoned Mined Land	543	Slope	%	None	None	15	30	50	All			
Obstruction Removal	500	No Hazard, Area Treated	ac.	5	20	40	80	All	All			
Toxic Discharge Control	455	Flow	cfs	5	10	25	50	100	1000			

RECREATION [5/]

PRACTICE NAME	PRAC. CODE	CONTROLLING FACTOR	UNITS	JOB CLASSES						MAX APPROVAL AUTHORITY		
				I	II	III	IV	V	VI	I&E	DSN	CST
Access Road	560	Culvert Pipe, I.D.	ft.	2	3	4	5	All	All			
		Monolithic Concrete Opening	sq.ft.	3	8	15	20	All	All			
		Bridge Span	ft.	8	12	16	20	All	All			
		Surface Treatment	Type	Earth	Gravel	Asphalt	Ashp-Con.	All	All			
		Length	1000 ft.	2	5	10	15	All	All			
		Grade (Max.)	%	5	6	7	8	All	All			
Heavy Use Area Protection	561	Surface Treatment	Kind	Gravel	Concrete	Concrete	Asphalt	All	All			
		Area Treated	sq.yd.	1250	2500	4000	6000	All	All			
Recreation Land Grading & Shaping	566	Area Graded	ac.	4	6	8	All	All	All			
Recreaton Trail and Walkway	568	Surface Trmt.	Kind	Earth	Gravel	Asphalt	All	All	All			
		Length	1000 ft.	1	10	15	20	All	All			
Recreation Facilities		Water Supply or Sewage Treatment	Daily Design Capacity (People)									
		Onsite Public		None	None	100	150	200	400			
		Offsite Public		None	None	200	300	400	800			

[1/] Reference NEM 520.22.
[2/] All Controlling Factors apply for these practice codes.
[3/] Animal Unit (A.U.) equals 1000 lbs. animal live weight.
[4/] Approval to be made by State Conservation Engineer on revetments, bulkheads, and groins for beaches and shorelines.
[5/] Recreation Facilities apply only to the master plan.

DEFINITIONS OF MAXIMUM APPROVAL AUTHORITY COLUMNS:

Inventory and Evaluation (I&E) - Outside observation of an exploratory nature and preparation of sound alternative solutions of sufficient intensity for the cooperator to make treatment decisions. May require assistance from higher levels.

Design (DSN) - Designing and checking all aspects of the supporting data, drawings, and specifications to insure that the planned practice will meet the purpose for which it is installed. Also includes setting any specific inspection requirements.

Construction (CST) - Construction approval for all aspects of job including inspection services, check-out surveys and construction documentation.

AL501.04(b)(2) – Exhibit 2 – Application for Technical Assistance

U. S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

AL-ENG-27
6/99(Revised)

Application for Technical Assistance for the Design of a Dam and Reservoir or Embankment Type Structure.

DUE TO THE POTENTIAL LIABILITY ASSOCIATED WITH A DAM AND RESERVOIR OR EMBANKMENT AND IN THE INTEREST OF PUBLIC HEALTH, SAFETY, AND WELFARE, THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) IN ALABAMA REQUIRES THAT THE APPLICANT REVIEW AND SIGN THIS DOCUMENT PRIOR TO THE NRCS PROVIDING TECHNICAL ASSISTANCE FOR THE DESIGN OF A CLASS I OR LARGER RESERVOIR, SEDIMENT BASIN, OR GRADE CONTROL STRUCTURE.

1. Owner agrees to obtain all necessary easements and permits required for the construction.
2. Owner agrees the impoundment structure is not associated with any planned subdivision.
3. Owner agrees the dam will be constructed as designed and if it fails there would not likely be loss of life nor serious downstream property damages.
4. Owner agrees not to develop nor to allow development of downstream property, which he owns, or controls, which could cause serious property, damage to others or cause loss of life if the dam should fail.
5. Owner understands that if downstream property is developed by others, which would be adversely affected by a sudden failure of this dam, it is the owner's responsibility to upgrade the quality of the dam in accordance with the changed downstream conditions.
6. Owner agrees to construct or require the contractor to construct the structure according to drawings and specifications prepared by the NRCS.
7. Owner grants ingress-egress permission to NRCS employees when needed for inspections or operation and maintenance (O&M).
8. Owner agrees to operate and maintain the embankment and reservoir in accordance with a jointly-agreed-to O&M plan furnished with the design.
9. Owner understands that the NRCS makes no warranty, expressed or implied, of the integrity of the dam or its water holding ability.
10. Owner agrees with and will obtain a contractor who will accept the division of responsibilities as stated in the following paragraphs:

RESPONSIBILITIES OF:

LANDOWNERS

The owner will acquaint himself with the provisions of the drawings and specifications to determine that the completed structure will fulfill his present and future needs. Inspection during construction will be the responsibility of the landowner and contractor. The owner will advise the NRCS of (1) the anticipated date of construction commencement, (2) foundation preparation, (3) the date anticipated for backfill of the cut-off trench, (4) pipe installation, and (5) the date just prior to completion of construction with equipment still on site.

CONTRACTORS

The Contractor will acquaint himself with the provisions of the drawings and specifications, conditions at the site that may affect his schedule of operation, and the location and meaning of all stakes on the site. Failure to do so will not relieve him of the difficulties and cost pursuant to satisfactorily completing the work in compliance with the drawings and specifications and any written or verbal contract with the owner. The contractor and/or owner are responsible for construction layout from NRCS established lines and elevations. All benchmarks, grade and line stakes will be left undisturbed and protected by the contractor to facilitate construction and inspection to the extent practical.

AL501.04(b)(2) – Exhibit 2 – Application for Technical Assistance

The contractor, weather permitting, will schedule his work to start on the agreed-to date and work continuously until satisfactorily completed.

The contractor will implement any construction provisions of permits obtained by the landowner. Such provisions may include Best Management Practices for Construction in an NPDES Permit issued by ADEM. All damages occurring to completed or partially completed work or materials, by the elements or otherwise, during construction, will be the responsibility of the contractor. Absence of owner or Natural Resources Conservation Service personnel during construction will not relieve the contractor from completing the work in strict compliance with the drawings, specifications, and any permits.

Upon completion of the work, before moving his equipment, the contractor will request final concurrence by the owner and the NRCS or he will survey the work and certify to the NRCS that the work is according to drawings and specifications. The contractor will then receive concurrence that all work is completed satisfactorily or receive notice of the items that need to be completed prior to final concurrence.

U. S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

The NRCS makes no warranty, expressed or implied, of the impounding structure or the water holding ability of the structure.

The United States and its employees are in no manner a party to any verbal or written contract between the owner and the contractor. NRCS employees, within limit of personnel available, will assist the owner on inspections as requested during construction to help obtain satisfactory compliance with the drawings and specifications. An NRCS employee will, if time permits, inspect the keyway (cut-off) and laying of the pipe on all dams upon request of the owner or contractor.

NRCS employees will also, upon reasonable notice, participate in a final inspection to help determine that the structure was constructed in accordance with the drawings and specifications. Where cost-shared funds are involved, approval of an NRCS employee is required before payment can be made.

I request that the NRCS provide the technical assistance on the design and construction of a dam and reservoir or embankment type structure on my property at _____. _____. I understand and agree to the conditions set forth in this application and will construct and maintain this structure according to the drawings, specifications, and operation and maintenance plan prepared for the job.

_____

LANDOWNER ADDRESS DATE

AL501.04(b)(2) – Exhibit 2 – Application for Technical Assistance (con't)

U. S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

AL-ENG-27A
6/99 (Revised)

Application for Technical Assistance for the Design of a Pond Associated with an Aquaculture Farming Operation.

DUE TO THE POTENTIAL LIABILITY ASSOCIATED WITH A DAM AND POND AND IN THE INTEREST OF PUBLIC HEALTH, SAFETY, AND WELFARE, THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS) IN ALABAMA REQUIRES THAT THE APPLICANT REVIEW AND SIGN THIS DOCUMENT PRIOR TO THE NRCS PROVIDING TECHNICAL ASSISTANCE FOR THE DESIGN OF A CLASS I OR LARGER POND.

1. Owner agrees to obtain all necessary easements and permits required for the proposed pond.
2. Owner states that the pond is not associated with any planned subdivision.
3. Owner agrees that if the dam is constructed as designed and should fail, this would not likely cause loss of life nor serious downstream property damages.
4. Owner agrees not to develop nor to allow development of downstream property, which he owns, or controls, which could cause serious property, damage to others or cause loss of life if the dam should fail.
5. Owner understands that if downstream property is developed by others, which would be adversely affected by a sudden failure of this dam, it is the owner's responsibility to upgrade the quality of the dam in accordance with the changed downstream conditions.
6. Owner agrees to construct or require the contractor to construct the pond according to drawings and specifications prepared by the NRCS.
7. Owner grants ingress-egress permission to NRCS employees when needed for inspections or operation and maintenance (O&M).
8. Owner agrees to operate and maintain the dam and pond in accordance with a jointly-agreed-to O&M plan furnished with the design.
9. Owner understands that the NRCS makes no warranty, expressed or implied, of the integrity of the dam or its water holding ability.
10. Owner agrees with and will obtain a contractor who will accept the division of responsibilities as stated in the following paragraphs:

RESPONSIBILITIES OF:

LANDOWNERS

The owner will acquaint himself with the provisions of the drawings and specifications to determine that the completed structure will fulfill his present and future needs. Inspection during construction will be the responsibility of the landowner and contractor. He will advise the NRCS of the anticipated date of construction commencement and upon completion of construction.

CONTRACTORS

The Contractor will acquaint himself with the provisions of the drawings and specifications, conditions at the site that may affect his schedule of operation, and the location and meaning of all stakes on the site. The contractor and/or owner are responsible for construction layout from NRCS established lines and elevations. All benchmarks, grade and line stakes will be left undisturbed and protected by the contractor to facilitate construction and inspection to the extent practical.

The contractor will implement any construction provisions of permits obtained by the landowner. Such provisions may include Best Management Practices for Construction in an NPDES Permit issued by

AL501.04(b)(2) – Exhibit 2 – Application for Technical Assistance (con't)

ADEM. All damages occurring to completed or partially completed work or materials, by the elements or otherwise, during construction, will be the responsibility of the contractor. Absence of owner or NRCS personnel during construction will not relieve the contractor from completing the work in strict compliance with the drawings, specifications, and any permits.

Upon completion of the work, before moving his equipment, the contractor will survey the work and certify to the NRCS Technician that the work is according to drawings and specifications.

U. S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

The NRCS makes no warranty, expressed or implied, of the impounding structure or the water holding ability of the structure.

The United States and its employees are in no manner a party to any verbal or written contract between the owner and the contractor. NRCS employees, within limit of personnel available, will assist the owner on inspections during construction to help obtain satisfactory compliance with the drawings and specifications.

I request that the NRCS provide the technical assistance on the design and construction of a pond for an aquacultural farming operation on my property at _____ _____ _____. I understand and agree to the conditions set forth in this application and will construct and maintain this pond according to the drawings, specifications, and operation and maintenance plan prepared for the job. I understand that the NRCS will provide no further assistance if any item of this agreement is violated.

_____

LANDOWNER ADDRESS DATE

AL501.04(b)(2) – Exhibit 3 – Operation and Maintenance Plan

OPERATION AND MAINTENANCE PLAN*
Owner: _____ Dam
_____ County, Alabama
Date: _____

I. Operation

The Owner will operate this dam, reservoir, or structure in accordance with the terms of AL-ENG-27, Application for Technical Assistance for the Design and Construction of a Dam, Reservoir, or Embankment Type Structure.

II. Maintenance

A. It is anticipated that the following items of maintenance, repair or replacement will be needed during the effective life of the measure.

1. Vegetation

a. Reestablish vegetative cover on areas of poor stand and areas destroyed by erosion, freezing, or drought. If necessary, restore and topsoil eroded areas before reseeding.
b. Cut and burn or spray with approved herbicide and remove undesirable vegetation. Observe local ordinances regarding spraying and burning.
c. Fertilize and lime vegetation as required to maintain a vigorous stand on the dam and emergency spillway.
d. Control grazing to insure proper stand and vegetative cover.
e. Mow grass at regular intervals to maintain optimum cover and eliminate brush, briars, and trees.

2. Earth Dam

a. Replace soil removed by rodents, erosion, and unauthorized vehicles.
b. Inspect drainage systems annually for proper functioning and clean out or replace as necessary.
c. Maintain riprap or other wave-protection measures and replace as needed.
d. Remove and/or stabilize slide material as soon as practical.
e. Replace eroded material and revegetate eroded areas in emergency spillway immediately after they are found.
f. Maintain dam, levee, and spillway free of woody growth

3. Structures

a. Stabilize the outlet channel and plunge pool with appropriate maintenance measures at the outlet of the principal spillways having propped outlets.
b. Keep stilling basin free of debris, brush, beavers, and erosion.
c. Restore eroded earth materials or damaged riprap around energy dissipaters and reseed the disturbed area, if appropriate.
d. Restore concrete that has deteriorated.
e. Maintain in proper working order gates and valves, trash rack, and metal works. Restore protective coating and defective parts, if necessary.
f. Maintain fences in good condition as long as needed to protect structural works of improvement.
g. Repaint, as needed, all surfaces requiring protection by paint.

AL501.04(b)(2) – Exhibit 3 – Operation and Maintenance Plan (con't)

B. The estimated average annual cost of providing the necessary maintenance for this measure is 3 percent of construction cost or $_____. Funds to finance this cost will be provided by the Owner.

C. The Owner will be responsible for and promptly perform or have performed all maintenance of the measure determined by the Service to be needed.

D. The dam will be inspected at least annually and after unusually severe floods or the occurrence of any other unusual condition that might adversely affect the dam. Annual and special inspections will include but will not be limited to an examination of the following items.

1. Vegetation on the dam and in the emergency spillway.
2. Erosion on dam, spillway, plunge basin, and borrow area.
3. Trash and debris at the entrance of the emergency spillway, principal spillway, and the face of the dam.
4. Conditions of riprapped areas, shorelines, etc.
5. Changes made in trash racks, principal spillways, emergency spillways, and drain gates.

E. Service personnel will assist the Owner on annual and special inspections upon request.

F. A written report will be provided to the district conservationist if problems are found.

Owner: _____ Date: _____

Approved: _____ Date: _____
NRCS Technician

*Applicable only to conservation operations technical assistance dams.

Distribution: Owner and Field Office.

AL501.04(c)(3)

Registered professional engineers with delegated approval authority are authorized to participate and be responsible for the design, review, and processing of Class VI jobs.

The state design engineer will participate and be responsible for the design of project and conservation operations engineering structural measures for jobs Class VII and VIII (and Class VI as needed) with the approval by the SCE.

The state environmental engineer (SEE) will be responsible for final design review of water quality and waste management practices for Job Classes VII and VIII with the approval by the SCE. The SEE will provide environmental assistance on jobs of high environmental risk. The resource engineer with state-wide technical assistance coordination for waste management will be responsible for the design review and approval (if needed) of waste management practices for projects in Job Classes I through VI.

The SCE engineer will secure the assistance and coordination with NRCS specialists outside Alabama as needed for review of jobs Class VI through VIII.

AL501.05(a)(3) Engineering job review.

Only one level of design review will be performed (if needed) for engineering jobs Classes I through V. Non-routine jobs and complex jobs should always receive a design review by others prior to final approval by the designer. Routine jobs that are within the delegated approval authority of the designer do not necessarily require a design review. The designer with delegated approval authority is responsible for obtaining design review for any jobs deemed necessary.

The delegating resource engineer will be the reviewer for designs approved by employees, volunteer, and others. The SCE, or someone acting for the SCE, will be the reviewer for job Classes I through V approved by the delegating resource engineer.

AL501.05(b)(1)

Resource engineers will be responsible for conducting post reviews (spot checks) in each of their assigned counties in conformance with the General Manual. Copies of spot check reports (AL-ENG-13) will be provided to the assistant for field operations and the SCE.

The SCE will conduct a post review (as needed) of representative Classes I through V engineering jobs that were approved by the resource engineer. The number and type of jobs to be reviewed will be determined by the SCE. A report of the post reviews will be submitted to the appropriate assistant state conservationist for field operations.

PART 501 – AUTHORIZATIONS

SUBPART B – REPAIR AND REHABILITATION

AL501.23(c) Dams Installed Without NRCS Assistance.

Assistance approval on Class I through IV jobs as shown on AL-ENG-1, Alabama Job Approval Authority, [See AL501.04(a) Exhibit 1] will be provided by the responsible resource engineer. All other state approved jobs will be reviewed and approved by the state conservation engineer.

AL501.51(a) Scope.

Structures planned to stabilize streambanks and shorelines shall be designed and installed to meet applicable standards and specifications for the type of structure and method of construction involved. Measures planned and installed must be safe, present a pleasing appearance, blend with the landscape, perform satisfactorily, and comply with Alabama laws and regulations.

AL501.51(a)(2)

It is Service policy in Alabama to plan, design, and install streambank and shoreline protection measures in accordance with Engineering Standards.

Permanent measures and construction materials normally recommended are slope shaping and vegetation of critical areas, rock riprap, nonreinforced concrete, reinforced concrete, precast revetments, concrete jacks, gabions, pressure treated timber jacks, sheet piling, fencing, pressure treated timbers, soil bio-engineering, and other appropriate materials.

The use of tire mats for streambank or shoreline protection may be considered if local, state, and federal permits and regulations are obtained and followed; however permission for their use must be secured from the state conservationist. The request for permission to use tire mats will include a complete investigation report of the problem area including:

1. Location (how far from road, accessibility, etc.).
2. Size of watershed.
3. Expected runoff and duration of flood flows.
4. Size and shape of existing channel.
5. Soils at the site.
6. Nature of flow in the stream - perennial or intermittent.
7. Cause of existing meandering and erosion (fallen trees, sediment bars, livestock, etc.).
8. Analysis of the type of construction that is recommended for the project and methods to be used to ensure tires do not become dislodged.
9. Proposed design and specifications for the selected protective measure.
10. Cost evaluation for the project.
11. Ownership of the area, number, and whether private or public.

Items such as car bodies, old tires , and other junk will not be used for stabilization work in Alabama.

AL501.51(b)

Assistance will not be provided to solve erosion problems created by wave action on the open and unprotected shores of the Gulf and major lakes where the Corps of Engineers, Tennessee Valley Authority, or power companies have primary responsibility.