

## Subpart C - Dams

### PART 523 - IRRIGATION

#### SUBPART C - DAMS

##### AL523.02 Irrigation Guides

The Alabama Irrigation Guide presents some of the basic principles involved in irrigation planning, design, and evaluation, and includes detailed recommendations for irrigating the principal crops grown in Alabama. The guide is intended for use by technicians, conservationists, engineers, irrigation equipment dealers, farmers, and others engaged in planning, designing, and operating irrigation systems.

##### AL523.03 Assistance on Irrigation Projects

It is NRCS policy in Alabama to assist land users plan, design, install, and operate irrigation facilities in the most efficient manner feasible. This assistance includes evaluating and developing water supplies, water distribution systems, and conservation irrigation systems to apply supplemental water based on crops, soils, and other physical data.

When providing irrigation assistance, AL-ENG-10 (See AL523.03 Exhibit 1. AL-ENG10 - Irrigation and Specification Data Sheet for 449-Irrigation Water Management) will be completed, a copy filed in the land users case file, a copy will be provided to the land user, and a copy to others as needed.

Land users will be encouraged to utilize the services of consulting engineers, irrigation equipment companies, agri-businesses, the Cooperative Extension System Engineers, and others in designing detailed irrigation systems. When requested, NRCS engineers will check irrigation systems designed for district cooperators and for the Farm Service Agency to determine if they meet the recommended soil and water requirements of NRCS standards. When requested, NRCS may design irrigation systems for district cooperators and landowners with Farm Service Agency loans or in special project areas.

IRRIGATION DESIGN AND SPECIFICATION DATA SHEET  
FOR  
449 - IRRIGATION WATER MANAGEMENT

Name of Owner \_\_\_\_\_ S.W.C.D. \_\_\_\_\_ Plan No. \_\_\_\_\_

County \_\_\_\_\_ State \_\_\_\_\_ Date \_\_\_\_\_

Prepared by \_\_\_\_\_

1. DESIGN AREA - (Attach sketch or enlarged aerial photograph or map, showing exact boundaries of the area or areas to be irrigated. Show irrigated (IAcres) and total acreage in each field.)
2. TOPOGRAPHY - (Plot adequate topographic information on aforementioned photo or map. Profiles of proposed main line locations and elevations of points around field boundaries will suffice for uniformly sloping land.)
3. SOILS - Dominant soil series and phase. \_\_\_\_\_ (show on map also)  
Effective depth of profile to irrigate \_\_\_\_\_ inches  
Available water holding capacity of dominant soil type \_\_\_\_\_ in. ft.

4. WATER SUPPLY - (Show location on photo or map.)

Pond - Maximum Depth \_\_\_\_\_ Ft., \_\_\_\_\_ Surface Acres, \_\_\_\_\_ Ac.Ft.  
Well - Diameter \_\_\_\_\_ Ins., Capacity \_\_\_\_\_ G.P.M., Drawdown \_\_\_\_\_ Ft.  
Stream - Measured Dry Weather Flow \_\_\_\_\_ G.P.M.  
Quality of Water \_\_\_\_\_  
Distance from Design Area, Horiz. \_\_\_\_\_ Ft., Vert. \_\_\_\_\_ ± Ft.

5. CROPS - Rotation

Field No. _____	Crop _____	Acres _____
Field No. _____	Crop _____	Acres _____
Field No. _____	Crop _____	Acres _____

6. LABOR - Hours Required per Day \_\_\_\_\_, Days per Week \_\_\_\_\_

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7. DESIGN CRITERIA - (Taken from irrigation guide.)

Irrigation Specifications

Maximum application rate \_\_\_\_\_ inches/hour  
Available water holding capacity \_\_\_\_\_ inches/foot  
Moisture to replace each irrigation \_\_\_\_\_ inches  
Design moisture use rate \_\_\_\_\_ inches/day  
Recommended design application rate \_\_\_\_\_ inches/hour  
Irrigation interval \_\_\_\_\_ days  
Suggested application amount (I applied) \_\_\_\_\_ inches  
Maximum time allowable for completion for one irrigation (1I) \_\_\_\_\_ days

8. MINIMUM SYSTEM CAPACITY

$$\frac{453 \times \text{_____ (I acres)} \times \text{_____ (I applied)}}{\text{_____ Hrs. operated per day} \times \text{_____ (1I)}} = \text{_____ G.P.M.}$$

9. OTHER SPECIFICATIONS

Type of System:

Supply Line: Portable or Permanent Kind of Pipe \_\_\_\_\_  
Main Line: Portable or Permanent Kind of Pipe \_\_\_\_\_

Is continuous operation, using extra lateral lines and valves in main line, desired?

Yes \_\_\_\_\_ No \_\_\_\_\_

Proposed Power Source: Gasoline, Distillate, Diesel, Gas, Electricity, Other

\_\_\_\_\_

Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. MINIMUM DESIGN STANDARDS - Minimum standards for the design of this irrigation system shall be those recommended and adapted by the American Society of Agricultural Engineers and the Sprinkler Irrigation Association.