

ENGINEERING PLANNING CONSIDERATIONS CHECKLIST AND GUIDE

A - GENERAL (All Practices)

Client: _____ Date: _____
Data obtained by: _____ Date: _____
Designed by: _____ Date: _____
Checked by: _____ Date: _____
Quadrangle: _____
Latitude: _____ DEG-MIN
Longitude: _____ DEG-MIN

B - SOILS (All Practices)

Soil Survey: _____ Soil Name: _____
Soil Classification: _____
Land Slope: _____
Permeability: _____
High Water Table: _____
Depth to Bedrock: _____

C - DIVERSION AND GRASSWATERWAY - PLANNING DATA

(Practice Codes 362 & 412)

Hydrologic and Design Data:

Watershed Area: _____ Acres
Average Watershed Slope: _____
Rainfall Depth: _____ Inches (10-year frequency, 24- hour duration)
Weighted Runoff Curve No: _____
Retardance for Capacity: _____ Permissible Velocity: _____ CFS
Peak Discharge: _____ Retardance for Velocity: _____ FPS

D - AGRICULTURAL WASTE MANAGEMENT - PLANNING DATA

CLIENT: _____

DATE: _____

PLANNING DATA:

ANIMAL TYPE	NUMBER	AVERAGE WEIGHT LBS.	CONFINE TIME HRS.

VEGETATIVE COVER _____

WASH WATER

TIME TO FILL A 5 gal CONTAINER _____ SECONDS
 WASHING TIME _____ HRS/DAY

PRECIPITATION

NORMAL RAINFALL _____ IN/DAY
 25YR 24HR RAINFALL _____ IN
 EVAPORATION _____ IN/DAY

RUNOFF AREA

WAITING AND/OR ROOF AREA _____ SQ. FT.
 CONTRIBUTING DRAINAGE AREA _____ SQ. FT.

WASTE STORAGE STRUCTURE/POND DATA (EXISTING)

TOTAL DEPTH _____ FT
 SLOPE RATIO _____ :1
 TOP WIDTH _____ FT
 TOP LENGTH _____ FT

SPRINKLER (EXISTING)

BRAND _____
 MODEL _____
 NOZZLE SIZE _____ IN
 HEIGHT _____ FT

PIPELINE (EXISTING)

TYPE _____
 NOMINAL DIAMETER _____ IN _____ IN
 LENGTH _____ FT _____ FT

PUMP (EXISTING)

BRAND _____
 MODEL _____
 Q _____ GPM
 TDH _____ FT

MOTOR (EXISTING)

BRAND _____
 H.P. _____
 RPM _____
 POWER SOURCE 3 PHASE 1 PHASE PTO GAS DIESEL

STATIC HEAD

STATIC LIFT

_____ FT
 _____ FT

PLEASE INCLUDE COPY WITH SCALE OF AERIAL PHOTO, CONSERVATION PLAN MAP AND TOPOGRAPHIC QUADRANGLE SHOWING THE PROPOSED FIELDS TO BE IRRIGATED AND ACREAGE.

E - IRRIGATION SYSTEMS - PLANNING DATA

Client: _____

Date: _____

SYSTEM TYPE: **SPRINKLER**
 (Practice Code 442)

TRICKLE
 (Practice Code 441)

1. SOILS INFORMATION:

	Soil Depth (in)	Net Depth (in)	SPRINKLER		TRICKLE	
			Average AWC (in/in)	AWC (in)	Average WHC (in/in)	WHC (in)
Soils _____						
Slope % _____						
Intake Rate _____ in/hr						
Weighted WHC _____ in/in						
Adjustment to wetted area _____ ft						
TOTAL:	DEPTH		AWC		WHC	

2. CROP INFORMATION:

Crop	Acres	Root Depth (in)	Peak Use Rate (in/day)	TRICKLE			
				Row Spacing (ft)	Plant Spacing (ft)	Canopy Area (sq.ft.)	Area Shaded (decimal)
TOTAL							

3. WATER SUPPLY:

Reservoir: Storage: _____ ac-ft Recharge _____ gpm

Well: Measured Capacity _____ gpm @ _____ psi or _____ gph

 Design Pumping Lift _____ ft

 Distance supply source to field _____ ft

Notes: Interpolate values in NEH, Section 15, Chapter 7, Table 7-2 to find adjustment to wetted area.
Percent area shaded = canopy area/ plant spacing.

F - WATER FACILITY INSTALLATION - PLANNING DATA

Client: _____

Date: _____

1. GENERAL INFORMATION

A - Daily Requirements:

No. of Animals	Kind of Animal	Water Demand GPD/Animal	Water Requirements (gpd) COL(1) X COL(3)
	Dairy Cow	40	0
	Beef Cattle	20	0
	Calf/Heifer	15	0
	Boar		0
	Gestating Sow		0
	Growing Pig		0
	Nursery Pig		0
	Horses	12	0
	Others		0
Total Daily Requirements (GPD)			0

B - Source of Water (Circle one):

Spring Deep Well Farm Pond Aqueduct PTO Other
If From Aqueduct:
 Pressure at point of delivery = _____ psi or _____ ft.

C - Adequate pipeline for the site: **(Practice Code 516)**
 PVC _____ GALV. _____

D - Power Source (If a pump is needed)

Electric Gas Diesel Hydro-ram (Ariete)

E. Existing watering facility: **(Practice Code 614)**

Dimension: _____ Material: _____

2. SPRING DEVELOPMENT: (Practice Code 574)

A - Volume of water from spring = _____ GPM

B - Collector system (Check one)

Tile _____ Perforated Pipe _____ Crushed Rock _____

C - Cut-off wall (Check one)

Clay _____ Mansory _____ Concrete _____

D - Spring Box

1. Existing Capacity = _____ Gallons

2. Existing Dimensions :

L = _____ W = _____ H = _____ Rectangular
 D = _____ H = _____ Cylinder