SPRINKLER IRRIGATION DATA SHEET

Conservation District ___________________ Field Office ___________________

Cooperator ___________________ Location ___________________

Identification No. ___________________ Field No. ____________

1. Design area ___________________ acres

Resource area ___________________ Design soil unit ___________________

Description of soils ___________________

2. Crops: 1. ___________________ acres

2. ___________________ acres

3. ___________________ acres

4. ___________________ acres

Total ___________________ acres

3. Water supply:

Source of supply: (stream, well, reservoir, etc.) ___________________

Reservoir: Storage ______ ac. ft. Available for Irrigation ______ ac. ft.

Well: Measured capacity _______ G.P.M. Static level _______ ft.

Maximum pumping lift _______ ft.

Conductance of irrigation water ___________________

SAR of irrigation water ___________________

Is water suited for sprinkler irrigation? ___________________

Distance supply source to field ______ ft.

Elev. dif. source to field (plus or minus) ______ ft.

4. Other data:

Number of moves desired per day ___________________

Type of power to be used ___________________
5. Map of design area - Scale 1" = ___________ ft.  
Sketch map on grid or attach photo or overlay.

Sketch map should show: 

a. Source of water  
b. Major elevation differences  
c. Row direction  
d. Sprinkler system layout  
e. Plan of operation  
f. Field obstructions (gullies, trees, buildings, etc.)  
g. North arrow
6. Soil Information

- Soil (unit, name, group)
- Moisture holding capacity (in/ft)
- Basic intake rate (in/hr)

7. Crop Information

- Kind of crop
- Acreage to be grown
- Moisture extraction root depths (ft)

8. System Specifications

- Sprinkler spacing
- Lateral spacing
  - Laterals (1) Max. Length
  - Pipe size
  - No. of sprinklers
  - (2) Max. Length
  - Pipe size
  - No. of sprinklers
- Total no. of laterals
- Laterals operating together
- Total no. of sprinklers
- Total Q available (GPM)
- Nozzle capacity (GPM)
- Nozzle size
- Nozzle pressure (psi)
- Pressure loss in lateral line (psi)

9. Design Procedure

- Application rate (in/hr)
- Time per lateral set
- Gross application (in)
- Application efficiency (%)
- Net application (in)
- Lateral settings per day
- Days of operation per interval
- Quantity of water required (gpm)
- Use rate (in/day)
- Irrigation interval (days)

\[ Q = 453 \times \text{ac.} \times \text{in. gross application} \]
\[ \frac{\text{hrs. operation/day} \times \text{days/irrigation}}{\text{GPM}} \]
10. Outlet Valves
   Type
   Size
   Number
   Spacing

11. Main Line Design
   Pipeline Material
   Friction Loss Ft/100 Ft.
   | GPM Length | Pipe Dia. | Pipe Dia. | PSI | FT | PSI | FT | PSI | FT |
   |            | in.       | in.       |     |    |     |    |     |    |

12. Over-all System Requirements
   Sprinkler pressure at first nozzle
   Misc. and fitting losses
   Elevation difference
   Pump discharge pressure
   Pumping lift
   Total Head

13. Pump Requirements
   Capacity (gpm)
   PSI or ft. of head
   Power requirements BHP

14. Appurtenances
   Type
   Size
   Number
   Location

15. Remarks

   Designed By ____________________  Date __________
   Approved By ____________________  Date __________
   Checked By ____________________  Date __________
   Coop. Accep. ____________________  Date __________