USDA, Natural Resources Conservation Service
National Employee Development Center

IWM

Sample Plan

Blank

NEDC
National Employee Development Center

THE FOLLOWING ITEMS NEED TO BE ADDRESSED IN AN IRRIGATION WATER MANAGEMENT PLAN TO PROVIDE THE INFORMATION NECESSARY TO EFFICIENTLY MANAGE AN IRRIGATION SYSTEM.

(When the information is provided elsewhere in the plan, just reference it. If the item is not applicable, indicate N/A.)

Farmer _____

Field office _____

Technician, date _____

Field ID and size (acres) _____

Method of irrigation _____

RESOURCES

Soils

Name _____

Intake family or maximum application rate for sprinklers _____

Other restrictions, problems or limitations _____

_____

Water holding capacity of soil

Depth (ft)	0 - 12"	12 - 24"	24 - 36"	36 - 48"	48 - 60"
Texture	_____	_____	_____	_____	_____
WHC (in)	_____	_____	_____	_____	_____

Crops

Cropping pattern	_____	_____	_____	_____
Planting date	_____	_____	_____	_____
Harvest date	_____	_____	_____	_____

Rooting depth (ft)	_____	_____	_____	_____
Peak period water requirement (in/day)	_____	_____	_____	_____
Annual irrigation requirement (in/yr)	_____	_____	_____	_____

Water supply

Kind _____

Location _____

Quantity (flow rate, acre feet) _____

Quality _____

Land preparation

Land leveling, land smoothing, access roads and etc. _____

_____

Erosion control

Max. application rates or stream size, tillage practices, mulching, structures and etc. _____

_____

Water removal

Surface _____

Subsurface _____

Distribution system

Method (ditch or pipeline) _____

Capacity (cfs or gpm) _____

Size _____

Length _____

Location _____

Method of irrigation scheduling (description) _____

_____

Method of water measurement (description) _____

_____

Method of moisturement measurement (description) _____

TRICKLE IRRIGATION SYSTEM

Field size _____

Row spacing (ft) _____

In row spacing (ft) _____

System capacity (gpm) _____

Time of application _____

Irrigation interval _____

Gross volume of water required per plant (gal/day) _____

Maximum net depth of application _____

Net application _____

Application efficiency _____

Gross application _____

Average emitter discharge (gph) _____

Average emitter pressure (psi) _____

Allowable pressure variation (psi) _____

Canopy area (%) _____

Emitter spacing (ft x ft) _____

Emiters per plant _____

Percent area wetted (%) _____

Number of stations _____

Gross seasonal volume _____

Seasonal operating time _____

Emission uniformity _____

COMMENTS:

_____

_____

_____

_____

_____

BORDER IRRIGATION SYSTEM

Field size _____

Border length (ft) _____

Border width (ft) _____

Border slope (%) _____

Number of borders per set _____

Border ridge height (ft) _____

System capacity (cfs or gpm) _____

Seasonal irrigation requirement (in) _____

APPLICATION MANAGEMENT

Net application (in.)	_____	_____	_____
Efficiency (%)	_____	_____	_____
Gross application (in.)	_____	_____	_____
Stream size (cfs per border)	_____	_____	_____
Time of application (hrs/set)	_____	_____	_____

COMMENTS:

_____

_____

_____

_____

_____

FURROW IRRIGATION SYSTEM

Field size	_____
Furrow length (ft)	_____
Furrow width (ft)	_____
Furrow slope (%)	_____
System capacity (gpm or cfs)	_____
Seasonal gross volume (ac. ft.)	_____
Is tailwater recovery used	_____

APPLICATION MANAGEMENT

Net application (in.)	_____	_____	_____
Efficiency (%)	_____	_____	_____
Gross application (in.)	_____	_____	_____
Stream size (pgm/furrow)	_____	_____	_____
Cut-back stream size (gpm/furrow)	_____	_____	_____
Estimated advance time or time to cut-back (hr)	_____	_____	_____
Time of application	_____	_____	_____
Number of furrows per set	_____	_____	_____
Irrigation interval (days)	_____	_____	_____
Runoff (inches)	_____	_____	_____
Deep percolation (in.)	_____	_____	_____

COMMENTS:

_____

_____

_____

_____

_____

CENTER PIVOT SPRINKLER SYSTEM

Wetted radius of center pivot	_____
Portion of circle irrigated	_____
Wetted radius of end gun	_____

Percent of time end gun is on _____

Acres irrigated _____

Length of system _____

Operating pressure, at pivot (psi) _____

End gun, capacity (gpm) _____

End gun, nozzle size (in) _____

End gun, operating pressure (psi) _____

End gun, angle of operation _____

Acreage capacity, peak period _____

Seasonal irrigation requirement (in/yr) _____

System capacity _____

APPLICATION MANAGEMENT

Net application (in.) _____

System efficiency (%) _____

Gross application (in.) _____

Speed control setting (%) _____

Minimum wetted width needed to meet maximum application rate at end of pivot (ft.) _____

COMMENTS:

_____

_____

_____

_____

TRAVELING GUN SPRINKLER SYSTEM

Cable tow or hose pull _____

Length of field (ft) _____

Width of field (ft) _____

Acres in field _____

Cable tow or hard hose pull _____

Nozzle size, diameter (in) _____

Nozzle capacity (gpm) _____

Nozzle pressure (psi) _____

Nozzle wetted diameter (ft) _____

Angle of operation (degrees of circle) _____

Towpath spacing (% of wetted diameter) _____

Towpath spacing (ft) _____

Length of tow path (ft) _____

Number of towpaths _____

System capacity (gpm) _____

System capacity (ac. in/hr) _____

Diameter of hose (in) _____

Location of main line _____

APPLICATION MANAGEMENT

Net application (in) _____

System efficiency (%) _____

Gross application (in) _____

Travel speed (time per run) _____

Acres irrigated per run _____

Acres covered per hour _____

LEVEE (RICE) IRRIGATION SYSTEM

Field size _____

Field slope (%) _____

Levee interval (ft) _____

Number of levees in field _____

Average size of levee (ac) _____

Settled height of levees (ft) _____

Average depth of flood (in) _____

Available stream size (gpm or cfs) _____

APPLICATION MANAGEMENT

	Flushing	Apply Flood	Maintain Flood
Application rate (gpm/ac)	_____	_____	_____
Time of application per levee (hr)	_____	_____	_____
Time per irrigation (hrs or days)	_____	_____	_____
Average depth applied (in)	_____	_____	_____
Ac. in. applied to field	_____	_____	_____

COMMENTS:

PUMPING PLANT

Total dynamic head

Efficiency

Kind of energy

Energy use rate

Energy use per inch applied

Seasonal operating time

Seasonal energy consumption

COMMENTS: