

Irrigation System Inventory Worksheet

OWNER/OPERATOR _____ FIELD OFFICE _____

JOB DESCRIPTION _____

LOCATION _____

ASSISTED BY _____ DATE _____

(Collect and fill out only portions of this form that apply and are needed)

Area irrigated _____ acres

Crops

| | | | |
|--|--------|--------|--------|
| Crops now grown | | | |
| Typical planting date | | | |
| Typical harvest date | | | |
| Typical yield (unit) | () | () | () |
| Age of planting | | | |
| Cultivation and other cultural practices | | | |
| | | | |
| | | | |
| | | | |

Water

| | | | | |
|--|------------|----------|--------------|----------------|
| Water source(s) | | | | |
| irrigation organization | | | | |
| Water available (ft ³ /sec, gpm, miners inches, mg/da) | | | | |
| Seasonal total water available (ac-ft, million gal) | | | | |
| Water availability | continuous | demand | rotation | fixed schedule |
| Typical water availability times (schedule and ordering procedure) | | | | |
| | | | | |
| | | | | |
| Method of determining when and how much to irrigate: | | | | |
| | | | | |
| Is flow measuring device maintained and used? | | | | |
| Method of measuring water flow rate | | | | |
| Water quality: Sediment | | | Debris, moss | |
| Electrical conductivity | | mmhos/cm | SAR | |
| Comments | | | | |
| | | | | |
| | | | | |
| | | | | |

Example Irrigation System Inventory Worksheet—Continued

NAME _____ DATE _____ PREPARED BY _____

Soils (principal soil in field)

Soil # 1

| | | | | |
|--|---------|-------------------------------|----------|--------------|
| Map symbol | | Soil series & surface texture | | |
| Percentage of field (%) | | Area (acres) | | |
| Depth | Texture | AWC (in/in) | AWC (in) | Cum AWC (in) |
| | | | | |
| | | | | |
| | | | | |
| Depth to water table or restrictive layer ¹ | | | | |
| Intake family/intake group/max application rate | | | | |
| Comments | | | | |
| | | | | |
| | | | | |

Soil # 2

| | | | | |
|--|---------|-------------------------------|----------|--------------|
| Map symbol | | Soil series & surface texture | | |
| Percentage of field (%) | | Area (acres) | | |
| Depth | Texture | AWC (in/in) | AWC (in) | Cum AWC (in) |
| | | | | |
| | | | | |
| | | | | |
| Depth to water table or restrictive layer ¹ | | | | |
| Intake family/intake group/max application rate | | | | |
| Comments | | | | |
| | | | | |
| | | | | |

Soil # 3

| | | | | |
|--|---------|-------------------------------|----------|--------------|
| Map symbol | | Soil series & surface texture | | |
| Percentage of field (%) | | Area (acres) | | |
| Depth | Texture | AWC (in/in) | AWC (in) | Cum AWC (in) |
| | | | | |
| | | | | |
| | | | | |
| Depth to water table or restrictive layer ¹ | | | | |
| Intake family/intake group/max application rate | | | | |
| Comments | | | | |
| | | | | |
| | | | | |

¹ If restrictive for root development or water movement

Irrigation System Inventory Worksheet—*Continued*

NAME _____ DATE _____ PREPARED BY _____

Water supply and distribution system

Supply system to field (earth ditch, lined ditch, plastic pipeline, etc.):

| |
|---|
| Type |
| Size |
| Capacity (ft ³ /sec, gpm, miners inches, mgal/day) |
| Pressure/Elevation at head of field or turnout (lb/in ²) (ft) |
| System condition |
| Estimated conveyance efficiency of supply system (%) |

In-field distribution system (earth or lined ditch, buried pipe, surface portable pipe, lay flat tubing):

| |
|---|
| Type |
| Size |
| Capacity |
| Total available static head (gravity) (ft) |
| System condition |
| Estimated efficiency of delivery system (%) |
| Comments |
| |
| |

Water application system

Existing sprinkler system (attach design and/or system evaluation. if available):

| |
|---|
| Type system (center pivot, sidewheel-roll, hand move, traveler, big gun) |
| |
| Manufacturer name and model |
| Tower spacing (pivot or linear) (ft) End gun (pivot)? |
| Wheel size (sidewheel-roll) diameter |
| Type of drive |
| Pressure at lateral entrance (first head) (lb/in ²) |
| Mainline diameter/length |
| Lateral diameter/length |
| Lateral spacing (S ₁) Sprinkler head spacing (S _m) |
| Sprinkler make/model |
| Nozzle size(s) by type |
| Design nozzle pressure (lb/in ²) Wetted diameter (ft) |
| (Attach sprinkler head data for pivot) |
| Maximum elevation difference: Along lateral |
| Between sets |
| Application efficiency low 1/4 (E _Q) (%) (Estimated or attach evaluation) |
| Wind - Prevailing direction and velocity |
| Comments |
| |
| |

Irrigation System Inventory Worksheet—Continued

NAME _____ DATE _____ PREPARED BY _____

Existing surface system (attach system evaluation if available)

| | | | |
|--|--------------------------------|------------------------------------|---|
| Type of system (graded border, level border, graded furrow, level furrow, contour levee, contour ditch, wild flooding) | | | |
| Leveled fields: | Field slope: | In direction of irrigation | |
| | | ft/ft | |
| Cross slope | | ft/ft | |
| Smoothness: | <input type="checkbox"/> Rough | <input type="checkbox"/> Smooth | <input type="checkbox"/> Very smooth |
| | | | Laser equipment used <input type="checkbox"/> yes <input type="checkbox"/> no |
| Border or levee width | | Furrow/corrugation/rill spacing | |
| | ft | in | |
| Length of run: | Minimum | Maximum | Average |
| | ft | ft | ft |
| Number of furrows or borders per set | | | |
| Border or levee dike heights | | | |
| Application efficiency, low 1/4 (E _q) | | % (Estimated or attach evaluation) | |
| General maintenance of system | | | |
| | | | |
| | | | |

Drainage, tail water reuse facility

| |
|---|
| Method for collection and disposal of field runoff (tailwater, precipitation) |
| |
| |
| Final destination of runoff water |
| Surface/subsurface drainage system |
| |
| Environmental impacts of existing drainage system |
| |
| |

Existing micro irrigation system (Attach design or system evaluation if available)

| | | | |
|--|---------------|------------------------------|-----------------------------|
| Type of system: | Drip emitters | Mini spray/sprinklers | Line source |
| Spacing between discharge devices along distribution laterals | | (ft, in) | |
| Laterals - diameter, length | | | |
| Main lines and submains - diameter, length, etc. | | | |
| | | | |
| Spacing between distribution laterals | | (ft, in) | |
| Average application device discharge pressure (lbs/in ²) | | | |
| Are pressure compensating devices required? | | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| Are pressure compensating devices used? | | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| Average application device discharge (gph, gpm) | | | |
| Area irrigated by one irrigation set | | (acres) | |
| Typical irrigation set time | | (hr, min) | |
| Maximum elevation difference with one irrigation set | | (ft) | |
| Type and number of filters used | | | |
| Irrigation is initiated by: <input type="checkbox"/> manual control <input type="checkbox"/> programmed timer <input type="checkbox"/> clock timer <input type="checkbox"/> soil moisture sensing device | | | |
| Comments: | | | |
| | | | |

Irrigation System Inventory Worksheet—Continued

NAME _____ DATE _____ PREPARED BY _____

Existing subsurface irrigation system

| | |
|---|--|
| Water table control type and number of system or segments | |
| | |
| Water table control devices | <input type="checkbox"/> flashboard <input type="checkbox"/> float |
| | |
| Buried laterals | <input type="checkbox"/> diameter <input type="checkbox"/> spacing <input type="checkbox"/> depths |
| | |
| Water table elevation(s): Existing | Planned |

| Month | Elevation | Depth below surface |
|-------|-----------|---------------------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**Pumping plant
 Pump**

| | | | |
|--|-------------------|--------------------------------------|------|
| (Attach pump characteristic curves and/or pump system analysis if available) | | | |
| Pump elevation above mean sea level (approx) (ft) | | | |
| Pump type: <input type="checkbox"/> centrifugal <input type="checkbox"/> turbine <input type="checkbox"/> submersible <input type="checkbox"/> Propeller <input type="checkbox"/> axial flow | | | |
| Make | | Model | |
| Electric motor RPM | | Engine operating RPM | |
| Pump design discharge | | gpm @ _____ ft or lb/in ² | |
| Impeller size | Impeller diameter | Number of impellers | |
| Pressure at outlet of pump or inlet to pipeline | | lb/in ² | date |
| Discharge | gpm | How measured | date |
| Valves, fittings | | | |
| | | | |

Power unit

| | |
|----------|--------|
| Rated HP | at RPM |
|----------|--------|

Gear or belt drive mechanism

| | |
|---|-------------|
| Type (direct, gear, belt) | |
| RPM at driver | RPM at pump |
| Energy (A pump evaluation is required to get this data) | |
| Energy input (from evaluation) (KW) (gal/hr) (mcf) | |
| Pumping plant efficiency (from evaluation) (%) | |
| Energy cost per acre foot (from evaluation) | |
| General condition of equipment, problems | |
| | |
| | |

