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CENTER PIVOT or LINEAR MOVE SPRINKLER DATA SHEET

Owner / Operator: Field or Tract:

Planned by: Date: Engr. Job Class:

Checked by: Date:

Approved by: Date:

LEGAL: Section: Township: Range: County:

Planned Irrigation System Information:

☐ Plan Map of System is Attached

Minimum required wetted diameter of outside sprinkler: feet

Planned System Length feet; Planned System capacity gpm **- or -** gpm/ac
(without an end gun or cornering system)

Pivot pad elevation: ; Field high point elevation along pivot lateral

Location of Maximum Ground Elev. If not at end of pivot:

Sprinkler Placement: ☐ on the pipe ☐ drop sprinklers above the canopy (ie: MESA System)

☐ in the canopy (ie: LPIC System) ☐ below the canopy (ie: LEPA or LESA System)

Minimum height above ground: feet **– or –** Minimum height above planned crop canopy: feet

The system _____ planned with an end gun

Supplier/Dealer shall submit the following at least 14 days prior to installation:

The computer printout showing sprinkler locations, sprinkler flow rates, pipe pressures, sprinkler pressure, type of sprinkler, nozzle sizes, drop length, type and pressure rating of regulators, friction loss “C” factors, lateral inside diameter(s), timer setting – gross application depth table, and field elevation gain in feet to ensure all design requirements are met prior to installation. Also, documentation of the Heermann - Hein Coefficient of Uniformity (CU) shall be provided. The minimum CU must be 90% or greater. In lieu of CU information sprinkler spacing shall be in accordance with applicable NRCS FOTG 442 Standard requirements and criteria. Failure to provide the computer printout prior to installation may result in NRCS being unable to certify acceptable performance and will jeopardize the receipt of any pending cost share assistance.

Note: This sheet shall be provided to the sprinkler dealer / supplier prior to the design of the sprinkler package. A copy of the most current NRCS Standard and associated NE Supplements shall also be included.

INSTALLATION DATA

	AS DESIGNED	AS INSTALLED
Heermann – Hein CU	%	
Sprinkler Type		
Number of Sprinklers		
Number of Pressure Regulators		
Pressure Regulator Rating (psi)		
Sprinkler height above ground or canopy (ft)		
Length of System Lateral (ft)		
Main I.D. of System Lateral (in)	in. id for ft.	in. id for ft.
Secondary I.D. of System Lateral (in)	in. id for ft.	in. id for ft.
Wetted diameter of outer nozzle (ft)		

Is sprinkler spacing based upon minimum CU criteria ☐, or is spacing based upon a % of the wetted diameter ☐

Does sprinkler spacing match criteria as shown on other side of this sheet? ☐ Y ☐ N

Are Drops Uniform? ☐ Y ☐ N

Does System Installation Match Design? ☐ Y ☐ N

If not, explain why:

Pivot Brand: _____

Sprinkler Brand: _____

Controller Brand: _____

Remarks:

Vendor's nozzle design printout is attached? ☐ Y ☐ N

Is vendor's printout adequate? ☐ Y ☐ N

If not, explain why:

I certify that this practice (FOTG 442 – Irrigation System, Sprinkler) has been installed in accordance with these plans and specifications.

_____ _____

NRCS Representative or Technical Service Provider Date

Instructions for Center Pivot or Linear Move Sprinkler Data Sheet

FRONT PAGE: The front portion of this data sheet is to be filled out by NRCS personnel and provided to the vendor / supplier of the center pivot sprinkler and/or nozzle package.

Owner/Operator – Self explanatory

Field or Tract - Description of field

Planned by: – NRCS Planner with date

Job Class - Engineering Job Class (I-V), See NEM NE501.09 for assigning proper job class

Checked by: The person who checks this data sheet and the date

Approved by – NRCS employee with proper engineering JAA for NRCS Practice Standard 442 or TSP and the date of approval

Legal Description – Location of planned system

Plan Map of System is Attached – This is a reminder to attach the plan map. The map must show and label the irrigated area, locations of all planned components of the irrigation system including, but not limited to,: the pivot, well and pumping plant, flow meter, pipelines, cleaning devices, and all other appurtenances needed for the system to function.

Minimum wetted diameter of outside sprinkler required - This number (in feet) is obtained from the results of the CPNozzle computer program

Planned System Length – Exact length must be obtained from the supplier. An approximate length may have been used in the CPNozzle analysis and is adequate if it is not significantly different from the exact length provided by the supplier.

Planned System Capacity – This number (in gallons per minute) is obtained from the results of the IWR computer program and/or the Center Pivot Sprinkler Design Worksheet. You may utilize the “gpm/acre” quantity in lieu of a total “gpm” for sites of unknown final acreage. If an end gun or cornering system is incorporated, the vendor will need to increase the system capacity to account for this extra flow rate.

Pivot Pad Elev. – The elevation of the pivot point obtained from a field survey.

Field high point elevation along pivot lateral – The highest field elevation the sprinkler must pass over, typically at the end of the lateral obtained from a field survey. If the high point occurs at any place other than the end of the pivot, indicate as such.

Location of Maximum Ground Elev., if not at end of pivot – Self-Explanatory

Sprinkler placement – Check option selected. See guidance provided in the FOTG 442 Standard.

Minimum height above ground – This number in feet is selected according to the guidance provided in the FOTG 442 Standard. **– OR – Minimum height above planned crop canopy** – The height shall be reflective of the planned crop within the rotation. Canopy, for corn, shall be defined as leaf stages before leaf stage 14.

End Gun – A self explanatory drop down box choice – user must choose either **IS** or **IS NOT**

Documentation instructions for the sprinkler vendor: Include all relevant information detailing the sprinkler package selected.

BACK PAGE: The back portion of the sheet is to be used to document the installation of the pivot and/or its components after field inspection**.**

Complete both "As Designed" and "As Installed" columns. Design values will come from the vendor's printout, while the Installed values shall be as verified in the field.

Heermann – Hein CU – The sprinkler package coefficient of uniformity as supplied by the sprinkler vendor or as generated through CPED or versions there-of.

Sprinkler Type – Type of sprinkler(s) (sprays, rotators, nutators, I-wobs, spinners, impacts, etc.)

Number of Sprinklers – Actual quantity of nozzles designed and installed

Number of Pressure Regulators – Record the actual quantity of pressure regulators. For those systems with a dual rating of regulators (ie: 10 psi and 15 psi pressure regulators) include the total number of each type.

Pressure Regulator Rating – Record the rated pressure (psi) for the regulators associated with the sprinkler system.

Sprinkler Height above ground or canopy – The as designed column shall reflect the minimum height above ground as proposed from the vendors sprinkler package printout. This must meet or exceed the sprinkler height planned on page 1. The as installed column shall be based upon a field measurement of critical sprinklers (ie: the outer 20%) on the system lateral.

Length of System Lateral – Record the length of the lateral

I.D. of the System Lateral – Record the inside diameter of the lateral pipe and said length of pipe. For systems with dual sized pipes include additional inside diameters and lateral length.

Wetted Diameter of outer nozzle – Record wetted diameter of outer nozzle from published manufacturer's performance tables for actual sprinkler, nozzle size, and height. A copy of the manufacturer's performance data shall be attached.

Is sprinkler spacing base on a CU or a % of the wetted diameter? Check the appropriate box, Self explanatory

Are the Drops Uniform? – Check yes or no box whether or not the nozzles are at a uniform height above the ground

System Installation Matches Design? – Check yes or no box. Explain or describe any discrepancies in the design verses the installed system or its components.

Pivot Brand – Brand of the pivot. Drop down selection box types include: Valley, Zimmatic, T&L, Reinke and Other.

Sprinkler Brand – Brand of Sprinkler. Drop down selection box types include: Nelson, Senninger, Rainbird, Valley and Other

Controller Brand – Brand of the pivot controller

Remarks – Record any other pertinent information about the installation

Vendor's Nozzle Design Printout – Check box acts as a reminder to attach the vendor's printout

Vendor's printout adequate? – Check the yes or no box. If no, then explain or describe the deficiencies in the area provided.

Signature and date – Self explanatory