

## SVGSP Ag Irrigation Efficiency Demonstration Project

**Goal:** Develop comparative data that identifies improved water efficiency from conversion of traditional MESA sprinklers to high efficiency irrigation systems that release a reduced volume of water closer to crop level in an effort to reduce water loss from evaporation and wind drift, reduce overall energy requirements, and increase groundwater reliability. The following table presents a 2-year program to develop reference data, install high efficiency sprinklers, and measure subsequent water use.

Ranch	Fall 2024	Spring 2025	2025 Irrigation Season	Fall 2025	2026 Irrigation Season	Comments
Roberti Pivot 2	Existing McCrometer meter	<b>Install:</b> SM Sensor -	High Efficiency Orbitor		High Eff. Orbitor	Pivot 10 Reference Compare to Pivot 13
Roberti Pivot 10	Existing meter	Existing SM Sensor	MESA	<b>Install:</b> High Eff. Orbitor	High Eff. Orbitor	
M. Goodwin North Pivot	<b>Install:</b> Flowmeter on Pivot	<b>Install:</b> SM Sensor	MESA	<b>Install:</b> LESA/LEPA	LESA/LEPA	LESA/LEPA system to be determined
DS Ranch Davie Styx	<b>Install:</b> Flowmeter on Pivot	<b>Install:</b> SM Sensor	MESA	<b>Install:</b> LESA/LEPA	LESA/LEPA	LESA/LEPA system to be determined

### Capital Costs-

The capital costs for this project are estimated to be between \$85,000 and \$110,000 depending on the type of high efficiency sprinklers installed at Goodwin and DS Ranches in the Fall of 2025. The estimated capital costs include all necessary material for flow meters, soil moisture sensors, and installed sprinkler packages.

### High Efficiency Spray Head Requirements, including at least:

- Up to a 30-foot wetting diameter
- Less than 3.5-foot installation height above soil surface
- Up to 6-foot spacing between drops

### Deliverable:

The deliverable for this project will be an assessment of water savings realized from converting conventional MESA systems to high efficiency spray heads. A report will be developed that describes the analytical results of the study, costs, and recommendations for future conversions that result in water savings.