POTENTIAL RANGES OF IRRIGATION EFFICIENCY (%)
FOR TYPICAL IRRIGATION METHODS AND VARYING LEVELS OF IRRIGATION MANAGEMENT
(Adapted based upon information cited in UC ANR Publication 8571, Table 3)

Irrigation Method/System	Range in Potential Irrigation Efficiency (%)	Potential Irrigation Efficiency (%) (high level mgt)[1]	Potential Irrigation Efficiency (mid-level mgt)[2]	Potential Irrigation Efficiency (low level mgt)[3]
Mini/Microsprinkler				
Solid set, rotator, > 1 gpm nozzle	70 to 90	90	80	70
Minisprinkler, rotator, < 1 gpm nozzle	75 to 90	90	83	75
Microsprinkler – gph flow, fixed spray pattern	80 to 90	90	85	80
Drip irrigation	80 to 95	95	88	80
Subsurface drip irrigation	80 to 95	95	88	80
Sprinkler				
Solid set	70 to 85	85	78	70
Hand move	65 to 85	85	75	65
Side roll	65 to 85	85	75	65
Traveling gun (big gun)	65 to 75	75	70	65
Center pivot	75 to 90	90	83	75
Linear move	75 to 90	90	83	75
LEPA (Low Energy Precise Application)[4]	80 to 90	90	85	80
Surface				
Conventional furrow	45 to 65	65	55	45
Conventional furrow with tailwater return	60 to 80	80	70	60
Surge or alternate furrow	55 to 75	75	65	55
Basin flood	60 to 75	75	68	60
Precision level basin flood	60 to 80	80	70	60

[1] Irrigation systems often less than ten years old, frequent maintenance of irrigation systems, and use of ET_c, soil, or plant water status monitoring to guide irrigation scheduling.
[2] Irrigation systems often older than ten years, less frequent maintenance of irrigation systems, and minimal use of ET_c, soil, and plant water status to guide irrigation scheduling.
[3] Irrigation systems 20 years or older, very little or no maintenance of systems, and no use of ETc, soil moisture, or plant water status monitoring to guide irrigation scheduling.
[4] Linear move or center pivot systems that use drop tubes and low pressure bubblers to deliver water directly into furrows and minimize wind drip and canopy interference. Furrows are typically blocked with furrow dikes every two to four yards to control where water infiltrates.

How to Determine Level of Management

High Level

- Irrigation distribution evaluation completed every three to five years to identify maintenance needs.
- Assess water quality for changes in chemistry, biological materials (like bacteria, fungi, algae), and sediment load) at least every three to five years or when water supply is known to have changed.
- Select and inject acids, chloride, or polymers based upon known water quality.
- Clean filters, and flush hose lines at least every other month during irrigation season.
- Drive through check of irrigation system at each start up to scout for system breaks and needed plumbing repairs.
- Regular use of ET_c, soil, or plant water status monitoring to guide irrigation scheduling.

Mid-Level

- Irrigation distribution evaluation completed once when irrigation system nears ten years old.
- Assess water quality for changes at least every five years.
- Select and inject water treatment according to known water quality at least once each irrigation season.
- Clean filters and flush irrigation system at least once each season.
- Drive through check of irrigation system start up every two to four weeks to scout for system breaks and make plumbing repairs.
- Minimal use of ET_c, soil, and plant water status to guide irrigation scheduling.

Low Level

- Irrigation system uniformity not assessed over the life of the system.
- Unknown water quality.
- No filter maintenance or chemigation practiced other than fertilizer injection.
- Seldom check irrigation system at start up for breaks and necessary plumbing repairs.
- No use of ET_c, soil, and plant water status to guide irrigation scheduling.