

WHAT FARMERS CAN DO TO SAVE WATER

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USDA

**NATURAL RESOURCES
CONSERVATION SERVICE**

IRRIGATION WATER MANAGEMENT & WATER SAVINGS IN 2002

➤ 5,925 Acres Implemented

➤ 456 Million Gallons Saved

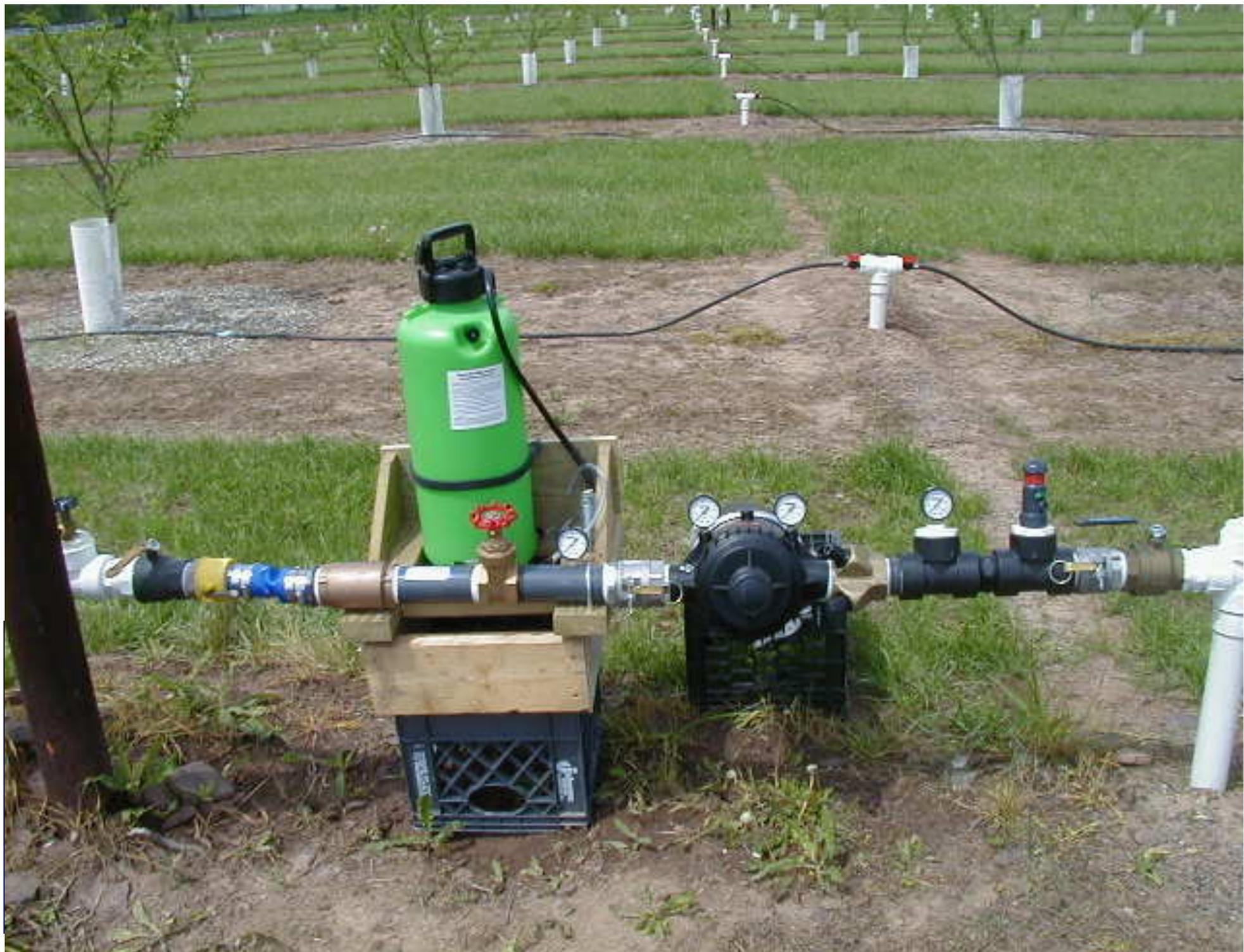
FARM IRRIGATION IN NEW JERSEY

- **105,000 Irrigated Cropland Acres**
- **88,000 Acres of Overhead Sprinkler**
 - Traveler 36,000 Ac
 - Hand Move 29,000 Ac
 - Pivot/Linear 13,000 Ac
 - Solid Set 11,000 Ac
- **16,000 Acres of Drip Irrigation**





















WATER CONSERVATION CHECKLIST

- Install a well designed system.
- Check flow rate, pressure, and uniformity.
- Monitor for leaks, worn nozzles, clogged emitters.
- With overhead systems, irrigate in early morning or evening to reduce evaporative losses.
- Avoid irrigating when wind speed exceeds 10mph.
- Use part circle sprinklers on field ends; stop travelers and guns on pivots to avoid irrigating roads and non-target areas.
- Operate at lower application rates to reduce runoff
- Monitor pivot travel speed to apply $< 1''$ to reduce runoff.

- Drought proof soil - mulching; reduce compaction
- Convert to low volume and low pressure nozzles and micro-irrigation systems.
- Install adjustable speed drive system when converting to drip irrigation
- Install soil moisture monitoring equipment
- Enroll in weather station network scheduling program or use other scheduling software programs.
- Automate system based on weather and soil moisture data.
- Install Tailwater Recovery System (container nursery).

Water Management Tools

- Flow Meters
- Pressure Gauges
- Soil Moisture Sensors and Weather Stations
- Backflow Prevention Devices
- Water Treatment Systems - Chlorination









WATERMARK
Soil Moisture Meter

(Centibars/kFw)

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READ TEMP TEST

TO READ SENSOR: PUSH READ

TO READ TEMP: PUSH TEMP

TO CHANGE TEMP. OFFSET: PUSH & HOLD READ

TO CHANGE TEMP. SCALE: PUSH TEMP

TO CHANGE TEMP. OFFSET: PUSH & HOLD TEMP

TO TEST: PUSH TEST

IRIDIUM METER COMPANY, INC.
RIVERSIDE, CALIFORNIA





Water Management Benefits

- Increase crop yield and quality
(efficient use of water and nutrients, better uniformity)
- Better disease control
- Fertilizer savings
- Reduced runoff and erosion
- Decreased risk of groundwater and surface water contamination
- Water and Energy savings

Cost Share Programs

- Environmental Quality Incentive Program
EQIP (Federal - USDA)
- Farmland Preservation and 8-Year Program
(State Program -NJDA)

EQIP

Cost Share for Irrigation Hardware

50% Cost - Share

- Permanently Installed Systems

75% Cost - Share

- Flow Meters
- Backflow Preventers
- Soil Moisture Sensors

EQIP

IWM Incentive Payments

- \$60 / ac / yr
- 3 year payment
- Implement IWM Plan
- Irrigation Scheduling Documentation

State Cost Share

Farmland Preservation Program

50% Cost - Share

- Permanently Installed Systems
(Mainlines, Solid Set, Pivot, Drip, and Micro)
- Management Tools
(Flowmeters, Soil Moisture Sensors)
- Submersible Pumps (Drip Irrigation)
- Wells

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