

## **Northwest Florida Water Management District**

### **Best Management Practices Cost Share Program Definitions**

The following nutrient and irrigation management Best Management Practices (BMPs) and tools are eligible for cost-share. Only purchases of new equipment or services will be eligible for cost-share payments.

### **Descriptions of Funded Equipment**

#### **Irrigation Retrofits:**

Irrigation system retrofits can be considered for cost-share funding following an irrigation audit by the Mobile Irrigation Lab when the results of the audit show that the system's distribution uniformity (DU) is 85% or less. Irrigation system retrofit includes seals, valves, pressure reducers or regulators and nozzles so that the DU, when the retrofit improvements are completed, will be (1) greater than 85% with an improvement of at least 10%; or (2) at least 90%. Systems for which the Mobile Irrigation Lab recommends replacement instead of retrofit will not be considered eligible for retrofit. Cost-share for full system replacement is not available under this program but producers can apply to NRCS for funding through the EQIP program.

The producer may, free of charge, use the Northwest Florida Mobile Irrigation Lab (NWFMIL), overseen by the West Florida Resource Conservation & Development Council, for irrigation system evaluations required through this cost-share program. This is a free service for producers. The District will only reimburse for the equipment the Mobile Irrigation Lab recommends. The District will only reimburse for equipment considered newer technology, not for equipment considered maintenance. This equipment may include more efficient nozzle packages, such as Senninger IWOBs or Nelson Rotators, pressure regulators, drop down hoses, adjusting endguns and other associated water savings features.

If the producer chooses to use a Mobile Irrigation Lab other than the NWFMIL for evaluations under this cost share program, the producer will be responsible for the cost of Mobile Irrigation Lab evaluations. Any cost for Mobile Irrigation Lab services will not be reimbursed under this cost-share program. An alternative Mobile Irrigation Lab vendor selected by the producer must follow the latest version of the Mobile Irrigation Lab Handbook as developed by the Florida Department of Agriculture and Consumer Services (FDACS), Office of Agricultural Water Policy. Deliverables are: uniformity score (weighted distribution and Christiansen's), recommendations to improve Irrigation uniformity, laminated sprinkler chart with center pivot information. The selected Mobile Irrigation Lab must update the State of Florida Mobile Irrigation Laboratory program website in accordance with FDACS Office of Agricultural Water Policy guidelines.

#### **New Irrigation Control Panels:**

New irrigation control panels are to upgrade existing controller panels that are not capable of interfacing with GPS devices, controlling application depth, and allowing for remote operation of the pivot system. To be eligible for this cost-share, the system must be less than two years old OR the most recent MIL evaluation (made within the past three years) must show that the system DU is 80% or greater OR the panel replacement must be part of an overall retrofit designed to bring the system DU to at least 80%.

#### **Pump Upgrades:**

The pump upgrade is replacement of the bowl assembly to convert high-pressure pumps to operate at a lower pressure (less than 50 psi) and increase efficiency.

#### **Subsurface Drip:**

Subsurface drip is a demonstration program to show the viability of subsurface drip within the Northwest Florida Water Management District as a more conservative practice over traditional irrigation practices. Producers must allow for demonstrations of the field to other producers or interested parties. Reimbursable items and materials include drip tape (including submains and manifolds), controllers, injection equipment, and associated equipment. For producers installing subsurface drip less than four (4) inches below the ground surface, reimbursement will only be for drip tape (including submains and manifolds), and associated plumbing.

**Endgun Control:**

Endgun control is to upgrade control systems to turn the endgun on or off based on the location of the center pivot in the field. Producers are able to conserve water that would have previously been sprayed outside the field or in other areas where irrigation is not needed.

**Remote Controlling of Equipment:**

Remote controlling of equipment assists Producers with scheduling irrigation events. The District anticipates that the equipment will lead to fewer irrigation events and enable producers to better manage frequency and duration of irrigation events. To be eligible for this cost-share, the system must be less than two years old OR the most recent MIL evaluation (made within the past three years) must show that the system DU is 80% or greater OR the panel replacement must be part of an overall retrofit designed to bring the system DU to at least 80%.

**Fertigation:**

Fertigation allows fertilizer or other water soluble products to be applied through the center pivot system. The application is appropriate through a center pivot with a DU of 80 percent or greater (evaluation must not be older than three years) or a system less than three years old. A fertigation system includes a chemical tank, injector pump, safety valves, backflow prevention, trailer (for portable units), and associated plumbing.

**Guidance Systems:**

Global Positioning System (GPS) technology is the cornerstone of other advanced systems. There are many different units available and several tiers of systems ranging from basic lightbars to sub-inch accurate Real-Time Kinematic (RTK) systems. A basic lightbar will eliminate overlap, and more elaborate systems are capable of automatic steering and equipment guidance. Guidance systems for combines and other harvesting machinery is useful for refining management zones used for precision agriculture practices and variable rate application of water and nutrients.

**Sensor Technology:**

Remote-sensing techniques, such as Red-Blue-Green (RGB) and Near Infra-Red (NIR) spectral analysis, as well as in-situ sensing equipment such as fixed location soil moisture probes (and associated data logging equipment), portable soil water content Time Domain Reflectometer (TDR) probes, chlorophyll content meters, and plant sap nitrate and potassium meters can provide useful information to guide nutrient and irrigation decisions. Cost-share for full weather stations is not available under this program but producers can apply to FDACS for funding of a Florida Automated Weather Network (FAWN) enabled weather station.

**Variable Rate and Section Control Technology:**

These tools work in tandem and require other technology components, most notably GPS guidance systems, to allow producers the ability to adjust the application rate of inputs based on factors such as terrain, defined boundaries, and in-field variability. Variable rate and section controls for both spreaders and sprayers are eligible for cost-share. To be eligible for this measure, a producer must have field equipment (tractor) with GPS guidance capabilities and mapped management zones based on precision soil sampling, yield mapping or other field specific information. This is intended to reduce nitrogen applied to crops.

**Banding or Side Dressing Fertilization Equipment:**

This includes the purchase of a banding machine with fertilizer coulters and injection nozzles to apply fertilizers and other soil amendments beneath the ground surface directly to the area of the plant roots. To be eligible for this measure, a producer must have field equipment with appropriate guidance capabilities.

**Automatic Shut-Off Devices:**

Flow meters or timer operated shut-off devices cease irrigation when appropriate amounts of water have been applied through the irrigation system.

**Other Agricultural Equipment and Services:**

Additional technologies that meet FDACS BMP guidelines and increase efficiency of fertilizer application or water use may also be eligible for cost-share under this contract. These include technologies such as variable rate and section controls for spreaders and sprayers.