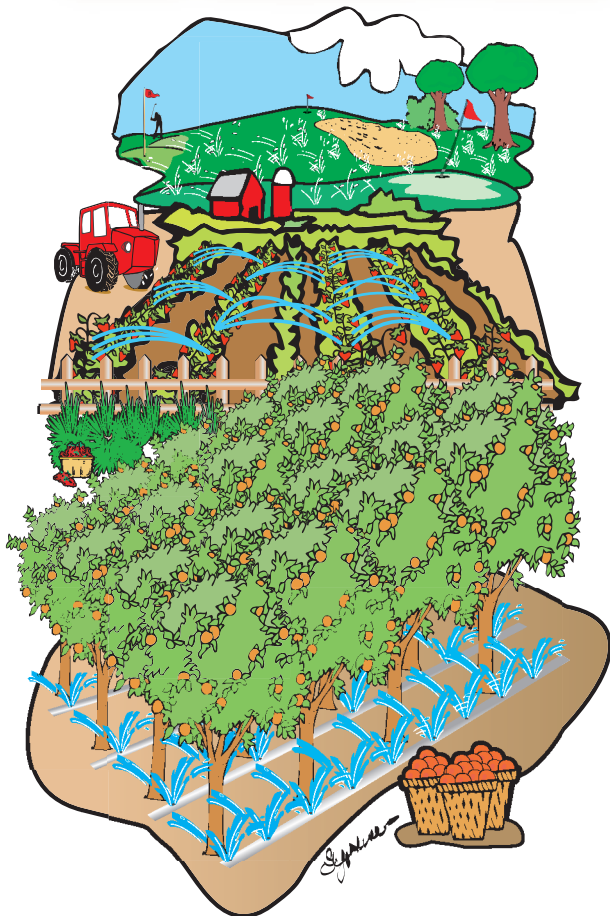


Irrigation Water Use Permits In The Southern Water Use Caution Area



Permitting Irrigation Quantities in the SWUCA

This brochure explains how irrigation quantities are calculated in the Southern Water Use Caution Area (SWUCA).

AGMOD Calculation Program

Since the late 1980s, the District has used a computer program called **AGMOD** to calculate permitted irrigation quantities. Using information from various Florida agricultural resources, AGMOD incorporates local climatic conditions, irrigated acreage, soil type, irrigation efficiency, and planting and harvesting schedules (if applicable) to calculate pre-plant and crop establishment irrigation, supplemental irrigation, cold protection and other irrigation requirements. Collectively, in acre-inches per irrigated acre, this is called the **Allocation Rate**. Permittees must adhere to their permitted Allocation Rate in order to be in compliance with SWUCA rules.

Pre-Plant and Crop Establishment

For most vegetable crops, the District permits the AGMOD-calculated quantity of water needed to raise and maintain a water table 30 inches below land surface. Crop establishment for strawberry production in the SWUCA is based on applying 12 acre-inches for environmental cooling.

Supplemental Irrigation

Supplemental irrigation is the amount of water needed for optimum plant growth beyond that which is provided by effective rainfall. Historically, for crops that are not grown using plastic mulch, the District has permitted supplemental irrigation quantities based on drought rainfall. This quantity is called a "2-in-10" irrigation and results in permitted quantities that statistically are needed only 20% of the time. In the SWUCA, the District

will now be permitting *non-plastic-mulched sites* for average rainfall conditions and providing a credit system for water during drier periods at the 2-in-10 rate.

Irrigation Efficiency

During irrigation there are unavoidable water losses en route from the water source to the plant. The District accounts for these efficiency losses by adding extra quantities to make up for them. Historically, permitted quantities were based on an irrigation management efficiency standard for each irrigation method. In the SWUCA, irrigation management is set at 75% efficiency. In 2004, it will increase to 80% for row crop irrigation.

Shaded Area for Citrus Acreage

Historically, citrus was irrigated using overhead systems that covered a full acre with water. Now, most citrus is irrigated under the tree canopy. In the SWUCA, the District calculates citrus quantities based on a densely planted grove where all but a six-foot-wide truck road between hedged rows is irrigated. This equates to 89.4% of each acre.

Water Conserving Credits

Because irrigation quantities for crops that utilize effective rainfall are based on average rainfall conditions, a quantity of water is also permitted to provide some drought protection in the form of **Water Conserving Credits**. The Credit program is incentive-based as will be shown in the example calculations in the last column on this page. All metered water use permits for quantities to irrigate crops utilizing effective rainfall are eligible for the Credit program. An account will be set up and managed by the District for each eligible permit.

Credits are not applicable for plastic-mulched crops because it is assumed that they receive negligible effective rainfall. Thus, they are permitted to withdraw 100% of their water needs from ground or surface water sources.

The crops that utilize effective rainfall are:

- blueberries
- citrus
- deciduous fruit/nut trees
- nurseries
- alfalfa or commercial hay
- sod
- grapes (vineyards)
- golf courses, turf grass, lawn/landscape
- peanuts
- soybeans
- corn
- sugarcane
- non-mulched vegetables, and
- crops irrigated via fully enclosed seepage

Initial Credits

Permits that are eligible for credits and exist as of January 1, 2003 will receive initial credits based on their current permit. All new eligible SWUCA permits will receive them at issuance. Initial credits are equal to two times the difference between the permitted 2-in-10 supplemental quantities and the permitted average supplemental quantities. This amount, in total gallons, is indicated on each permit.

Earned Credits

Additional credits are earned when a permittee irrigates less than the permitted average amount. Credits are used when a permittee has available credits in their account and uses more than the permitted average amount. Accumulated credits can be carried over with each permit renewal, but they can only be used on the acres where they were given or earned.

Use of Credits

Credits allow the grower to exceed the annual average permitted amount; however, the permitted 2-in-10 supplemental quantity for the specific crop type cannot be exceeded without special Governing Board approval.

Example Calculations
(Numbers are rounded to the nearest whole number for this example only.)

Initial Credits

The example is a 100-acre citrus grove.

| | |
|--------------------|---------------------------|
| 2-in-10 quantity = | 120,000 gpd |
| Annual Average = | -90,000 gpd |
| Difference = | 30,000 gpd |
| | x2 |
| | 60,000 gpd |
| | x 365 days per year |
| | 22 million gallons |

Earned Credits

For the same example, the first year irrigation was 80,000 gpd:

| | |
|------------------|---------------------|
| Annual Average = | 90,000 gpd |
| Used Quantity = | -80,000 gpd |
| Difference = | 10,000 gpd |
| | x 365 days per year |
| | 4 million gallons |

Credit Ledger

| | |
|-------------------|---------------------------|
| Current Balance = | 22 million gallons |
| Earned Credit = | + 4 million gallons |
| New Balance = | 26 million gallons |

The second year irrigation was 95,000 gpd:

| | |
|------------------|---------------------|
| Annual Average = | 90,000 gpd |
| Used Quantity = | -95,000 gpd |
| Difference = | -5,000 gpd |
| | x 365 days per year |
| | - 2 million gallons |

Credit Ledger

| | |
|-------------------|---------------------------|
| Current Balance = | 26 million gallons |
| Earned Credit = | - 2 million gallons |
| New Balance = | 24 million gallons |

Reporting

Permittees who have 100,000 gpd or more annual average quantities are required to submit an **Irrigation Water Use Form** at the end of each growing season. On it, the permittee gives all the information needed for the District to calculate the Allocation Rate used for compliance with SWUCA irrigation rules as well as credits earned or used. The Irrigation Water Use Form will be sent to each permittee approximately a month before it is due back to the District.

Frequently Asked Questions

What happens to my credit calculations when I don’t grow all the crops that are contained in my permit application?
If the permittee has not yet fully planted what was indicated on the application, the *Initial Credit* will not be affected. However, *Earned Credits* will be based on what was actually grown and irrigated. The equation used to calculate Earned Credits includes the actual acreage grown.

What happens to the credit balance when I have to use water for freeze protection?
The quantities permitted for crop protection do not add into the permitted Allocation Rate. The District sends a form to complete with how much water was used for crop protection shortly after it was used to all permittees who have crop protection quantities on their permit. The District subtracts this amount from the total gallons used for the season before calculating the acre-inches used.

How will I know what my Water Conserving Credit balance is?
You may call any District office and someone in Water Use Regulation can look that up for you. Phone numbers are provided on this brochure. Your balance will also be shown on the Irrigation Water Use Form when it is sent to you.

Can I use my credits anywhere on my farm?
Because credits are provided for drought protection for crops that rely in part on rainfall for optimum growth, they may only be used on the crop on which they were given or earned.

What happens to the credits if I sell my land and purchase land elsewhere?
The credits stay with the location on which they were earned. If you begin an entirely new farming operation growing crops eligible for credits elsewhere, an Initial Credit will be given to you at the time the permit to irrigate the proposed crop is granted.

What happens if I change crops?
If your change in crops requires significantly different quantities or a change in the surface water system on your property, you will have to modify your permit. If your change is from a crop-irrigation method that is not eligible for credits, (100% of its needed irrigation quantities are permitted) to one that is eligible for credits, an account will be established for your permit, and Initial Credits will be given with the modification. However, if the previous crop was eligible for credits, even though it was different from your proposed crop, another set of *Initial Credits* will not be given. Afterwards, *Earned Credits* will be calculated on your new crop.

My irrigation efficiency is below the District’s permitting standard. What can I do?
The District funds a Mobile Irrigation Laboratory program with the Natural Resources Conservation Service (N.R.C.S.). They will evaluate your system at no charge and make recommendations on how to improve irrigation efficiency. Call to schedule an appointment at (863) 773-4764 (U.S.D.A. Service Center) and choose the N.R.C.S. option. Ask for the Mobile Irrigation Lab.

For more information, you may call any of the Service Offices and ask to speak to someone in the Water Use Regulation Section.

Tampa Service Office
7601 U.S. Hwy 301 N.
Tampa, FL 33637-6759
(813) 985-7481
Toll Free 1-800-836-0797*

Bartow Service Office
170 Century Blvd.
Bartow, FL 33830-7700
(863) 534-1448
Toll Free 1-800- 492-7862*

Sarasota Service Office
6750 Fruitville Road
Sarasota, FL 34240-9711
(941) 377-3722
Toll Free 1-800-320-3503*

Brooksville Technical Services
2379 Broad Street
Brooksville, FL 34604-6899
(352) 796-7211
Toll Free 1-800-423-1476*



The District does not discriminate based on disability. Anyone requiring reasonable accommodation as provided for in the Americans with Disabilities Act should contact the Records and Data Department at (352) 796-7211, ext. 4299 or 1-800-423-1476, ext. 4299. TDD only: 1-800-231-6103.

* All 1-800 telephone numbers are for Florida access only.