



# Water Conservation Plan Form Citrus

## GENERAL INFORMATION

**DRAFT**

9/2004

Applicant Name: \_\_\_\_\_

Project Name: \_\_\_\_\_

CUP Number: \_\_\_\_\_

Date Plan Submitted: \_\_\_\_\_

Agent's Name: \_\_\_\_\_

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### Section 12.5.7.1 of the Applicant's Handbook States:

All individual permit applicants for agricultural, nursery and aquacultural uses must submit a water conservation plan for their operation to the District at the time of permit application. The plan must contain specific activities designed to conserve water. The water conservation plan must include provision for the following:

- (a) A program for increasing the water use efficiency of the applicant's operation. As part of this program, each grower must conduct an analysis of the operation's current water use practices and the water saving potential of proposed practices. This analysis can be completed using the Soil Conservation Service's Farm Irrigation Rating Method (FIRM (SCS Engineering Technical Note FL-17, United States Department of Agriculture, Soil Conservation Service, 1987) or an equivalent method. Based on the results of the FIRM Analysis, the applicant must implement direct and indirect water saving measures. Appendix I provides an outline of water conservation measures which the applicant may undertake to meet this requirement. Individual provisions in Appendix I are not requirements per se and do not exclude alternative conservation measures the applicant may which to propose to the District.

(b) An analysis of the economic, environmental and technical feasibility of using reclaimed water, recycling water on-site, and utilizing the lowest quality water source possible.

(c) Procedures and timeframes for implementation and for periodic assessment and revision of the water conservation plan.

In evaluating each proposed water conservation plan, the District will consider:

- The specific proposed use relative to other similar uses
- Available technology
- Economic feasibility

## Section I – WATER USE EFFICIENCY

### I. Conservation Service Plans:

If you have any of the following information, please attach a copy:

- Natural Resources Conservation Service (formerly Soil Conservation Service) Irrigation Water Management Plan
- Natural Resources Conservation Service (formerly Soil Conservation Service) Farm Irrigation Rating Method Analysis
- Other written information describing your water conservation activities

### II. Water Use Efficiency:

1. What method(s) do you use to determine when to begin irrigation?

- Rain Gauges  
 Observation Well(s)  
 Soil Moisture Monitoring Device(s)  
 Weir Level  
 Judgment  
 Explain \_\_\_\_\_  
 Other  
 Explain \_\_\_\_\_

2. What factors do you use to use to determine how long to run the irrigation system?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. How often do you irrigate (assuming no rain) and how much water is applied?

Grove / Block / Zones	Frequency (Number of times the grove is irrigated per week) (check)	Duration (hours per irrigation cycle)	Amount (inches per irrigation cycle)
	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> other <input type="checkbox"/>		
	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> other <input type="checkbox"/>		
	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> other <input type="checkbox"/>		
	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> other <input type="checkbox"/>		

If the irrigation frequency is “other”,  
Provide an explanation.

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4. Is the system operated manually or automatically?

Manually       Automatically

If the system is operated automatically using a timer, what measures are taken to ensure that overwatering does not occur?

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5. Are rainfall shut-off sensors installed on the irrigation system?

YES       NO

If yes,

Do the sensors operate individual irrigation controllers or multiple irrigation controllers?

Individual       Multiple

If no,

Provide a schedule for installing rainfall shut-off sensor on each irrigation controller on your irrigation system.

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6. Do you use irrigation system equipment with the highest water efficiency available (micro-spray emitters, water efficient filters, etc.)?

YES       NO

If yes,  
Describe your irrigation system equipment.

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If no,  
Describe the irrigation system equipment with higher water efficiency and  
propose an implementation schedule to convert your irrigation system to a  
more water efficient irrigation system.

If you do not propose to convert to a more water efficient system, you must  
demonstrate why it is not technically, environmentally or economically feasible  
to do so.

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7. Do you apply fertilizer? YES  NO

If yes,  
Are the fertilizers applied through the irrigation system?

YES  NO

If yes,  
Do you apply fertilizer during a regularly scheduled irrigation application?

YES  NO

If no,  
Propose an implementation schedule to coordinate fertilization with  
the irrigation cycle. If you do not propose to apply fertilizer during the  
scheduled irrigation cycle, you must demonstrate why it is not  
technically, environmentally or economically feasible to do so.

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8. What months do you apply fertilizer? \_\_\_\_\_

9. Do you maintain a ground cover between rows to reduce evaporative losses?

YES  NO

If yes,

Describe the type of ground cover.

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10. Do you use water for any other purposes not previously mentioned (i.e. soil preparation, pest control, dust control, equipment washing)

YES  NO

If yes,

Describe the use(s) of water and all water conservation measures associated with the use(s).

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11. Using the appropriate letter, indicate in the following table, the type of water use monitoring used for each of your wells, surface water pumps and connection points (reclaimed water).

(T) Totalizing in-line flow meter (required on most systems)

(P) Pump hour meter

(E) Fuel or electric record conversion

(O) Other (explain) \_\_\_\_\_

Well, Pump or Connection Point ID	Water Use Monitoring Method (T, P, E or O)

12. Please check any of the following irrigation system water conservation practices you have undertaken or plan to undertake and include implementation dates.

- On-site weather station Date \_\_\_\_\_
  - Professional irrigation consultant Date \_\_\_\_\_
  - Irrigation management educational session Date \_\_\_\_\_
  - Other (explain) Date \_\_\_\_\_
- \_\_\_\_\_ Date \_\_\_\_\_

13. Summarize your maintenance and repair schedule by using the appropriate letter to indicate how often each of the following tasks is performed.

- (A) weekly                      (B) monthly                      (C) every time you irrigate
- (D) as needed                      (E) not feasible                      (F) not applicable

Using a pressure gauge to check system pressures and flow rates for leak and clog detection.

- A      B                      C                      D                      E                      F

Using gauges to check line pressure to verify consistent PSI between wellheads and the most distant nozzles.

- A      B                      C                      D                      E                      F

Checking to ensure nozzles are not irrigating non-crop areas.

- A      B                      C                      D                      E                      F

Repairing leaks and clogs.

A    B    C    D    E    F

Repairing worn or malfunctioning nozzles.

A    B    C    D    E    F

Other maintenance (explain): \_\_\_\_\_

A    B    C    D    E    F

14. Which of the following irrigation system improvements do currently use or do you plan to implement and when.

Computerized irrigation system      Date \_\_\_\_\_

Pressure regulation      Date \_\_\_\_\_

Other      Date \_\_\_\_\_  
(explain) \_\_\_\_\_

III. Freeze Protection

1. Do you use water for freeze protection?

YES       NO

If yes,

Describe in detail how you decide when to turn the irrigation system on and off for freeze protection.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Section II – LOWEST QUALITY WATER SOURCE

As part of this permit application, the SJRWMD requires that a feasibility analysis of the availability of a lower quality source of water be completed. This analysis includes an evaluation of the availability of reclaimed water, stormwater and surface water, as well as other potentially reliable sources of water.

### Section 10.3 (f) and (g) of the Applicant's Handbook State:

When reclaimed water is readily available it must be used in place of higher quality water sources unless the applicant demonstrates that its use is either not economically, environmentally or technologically feasible.

The lowest quality water source, including reclaimed water or surface water (which includes stormwater), is addressed in paragraph 40C-2.301(4)(f), and must be utilized for each applicable consumptive use.

### RECLAIMED WATER

Do you currently use or propose to accept reclaimed water for irrigation and/or freeze protection?

YES  NO

*If yes, answer the following questions:*

1. Provide the name of the facility providing the reclaimed water.

\_\_\_\_\_

2. Provide the date that reclaimed water became or will become available.

\_\_\_\_\_

3. Is the reclaimed water discharged into a surface water body or is it delivered via a pipeline into the irrigation system?

Surface water  Pipeline

If surface water,

Provide the name of the holding pond(s) \_\_\_\_\_

Is the pond lined? YES  NO

Is the pond part of a stormwater management system? YES  NO

If yes,

Is the pond interconnected with other ponds? YES  NO

If yes,

Does the pond have a control structure that prevents water from flowing out of the holding pond into the other ponds?

YES  NO

*If no, answer the following questions:*

1. Provide the name, address and contact person for all domestic wastewater facilities within a five-mile radius of your site.

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None within five miles

2. Have you contacted these individuals about the availability of reclaimed water?

YES  NO

**Provide a written response from each facility listed detailing the availability of reclaimed water.**

3. If you have determined that it is not feasible to accept reclaimed water at this time, you will need to demonstrate to the District that it is not economically, environmentally or technologically feasible to accept reclaimed water within the requested permit duration.

### SURFACE WATER

Do you currently use or propose to use any surface water sources for irrigation and/or freeze protection?

YES  NO

*If yes, answer the following questions:*

1. What is the source of the surface water?

Stormwater management system (retention pond)

Natural lake

River

Other (explain) \_\_\_\_\_

2. How many acres are irrigated with surface water?

Source	Acreage
Stormwater Management System	
Natural Lake	
River	
Other (explain _____)	

3. How many acres are freeze protected with surface water?

Source	Acreage
Stormwater Management System	
Natural Lake	
River	
Other (explain _____)	

GROUNDWATER

Is groundwater used or proposed to be used for irrigation?

YES

NO

*If yes, answer the following questions:*

1. What is the source of the groundwater?

- Surficial aquifer
- Intermediate aquifer
- Floridan aquifer
- Do not know

If Floridan aquifer,

Is your project located in an area where water in the Floridan aquifer is potable (drinking water quality)?

YES

NO

Do not Know

If yes,

Provide an evaluation of the feasibility of using lower quality water from a reclaimed water source, surface water source or the surficial or intermediate aquifers instead of the Floridan aquifer for irrigation. A feasibility assessment would include an evaluation of the amount of water available from these lowest quality water sources versus the irrigation demand.

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### Section III – PLAN IMPLEMENTATION SCHEDULE SUMMARY

In this section please summarize the Water Conservation Plan that you have prepared using this form. Be sure to apply an implementation schedule for each activity or action you have indicated will occur within your requested CUP duration. Water conservation activities must span the duration of the permit.

Activity	Proposed Date of Implementation

**Please keep a copy of this plan for your records.**

**Please sign and date this plan:**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Phone Number