SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

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(352) 796-7211 or 1 –800-423-1476 (FL only)
TDD only: 1-800-231-6103 (FL only)

WATER USE PERMIT APPLICATION SUPPLEMENTAL FORM AGRICULTURE

THE INFORMATION REQUESTED IN THIS FORM IS REQUESTED PURSUANT TO CHAPTER 373, FLORIDA STATUTES (F.S.), AND RULES 40D-2.091, 40D-2.101 AND 40D-2.301, FLORIDA ADMINISTRATIVE CODE. THIS FORM IS TO BE COMPLETED FOR GENERAL AND INDIVIDUAL WATER USE PERMIT APPLICATIONS THAT HAVE AN AGRICULTURAL COMPONENT TO THE WATER DEMAND.

PART I. GENERAL

Renewal and New applicants may apply for a 20-year permit term if sufficient data is submitted to demonstrate reasonable assurance that the conditions for permit issuance in Rule 40D-2.301, Florida Administrative Code will be met for the duration of the permit. Applicants for substantial modification can request that the permit be categorized a renewal and if it fulfills the requirements stated above, the applicant can ask for a 20-year permit term.

APPLICANT: _____

WUP NUMBER (if any): _____

If the project site is located within a drainage or water control district, provide the name of the district:

_____

Is water currently provided by the drainage district or water control district? If "yes," indicate quantities in gallons per day (gpd). ❑ Yes ❑ No

Annual average daily: _____ gpd

Peak month daily: _____ gpd

Maximum daily: _____ gpd

If "yes," provide an explanation of your need for quantities of water in excess of the quantity supplied by the drainage/water control district:

_____

_____

PART II. WATER DEMAND

Agricultural water use includes the water needs of all crops grown and animals raised as a commodity. Water needs for feed associated with recreational animals are included here. The non-irrigation water needs for animals used in the recreation industry (e.g., zoos, attractions) require that a **Recreation/ Aesthetic** supplemental form also be submitted.

Indicate by checking the box for the types of water use required. Complete only the sections that apply. If you require more space to complete the information, make copies of the respective pages and attach.

❑ IRRIGATION

Complete this section for all irrigation needs (those for minor lawn and landscape irrigation associated with the farm are in a separate section). If different crop types will be grown at the same location over time, list the most water-intensive crop for the permit so that there will be sufficient permitted quantities for less water-intensive crops. This is not the same as rotational crops (same crop grown in different locations over time).

Agriculture Supplemental Form

If the District's irrigation program, AGMOD, is used to indicate crops and irrigation quantities, it must be attached. If AGMOD is used, the applicant does not have to complete the IRRIGATION section.

Note: AGMOD cannot be used to determine quantities for improved pasture irrigation.

❑ Check here if AGMOD was used and its output is attached.

How to enter the data: Enter the irrigation requirements in gallons per day for crops by withdrawal point for each table in each section below. Multiple uses per withdrawal point, and multiple withdrawal points per use should be specified. Enter each crop type scenario separately. A scenario is a withdrawal point + crop + growing season + soil type + irrigation method combination. A separate crop type scenario should be entered into the tables when:

- It is a different crop type
- It is the same crop type with a different growing season
- It is the same crop irrigated by a different irrigation method
- It is the same crop type located in a different physical location (separate fields), if the fields are irrigated from separate withdrawal sources or have different soil types
- It is the same crop, but it is irrigated in separate zones (enter each zone separately)

This includes irrigated cover crops grown in off-season. Do not include non-irrigated cover crops.

Enter only irrigated acres that are the gross acreage under cultivation, including areas such as roads and internal ditches but excluding uncultivated areas such as wetlands, retention ponds and perimeter drainage ditches. Acreage is to be based on physical or planimeter measurements rather than substitute supply quantities such as rolls of plastic.

❑ **Dover/Plant City WUCA - Frost/Freeze Protection (FFP)**

Alternative FFP Feasibility Analysis

A feasibility analysis for alternative methods to provide FFP is required for all new or existing FFP withdrawals that have the potential to impact the Minimum Aquifer Level Protection Zone as described below:

1. If the proposed or existing use is for any crop type that typically requires FFP, an investigation of alternative methods of FFP is required. The District may have funding available to implement Best Management Practices (BMP's) to reduce FFP or to provide guidance on appropriate BMP's for FFP. Email the FARMS Department at FARMS@WaterMatters.org. Documentation of the investigation of alternative methods to provide FFP must be submitted.

   ❑ Attached

2. If this is an application for new or increased FFP that impact the Minimum Aquifer Level Protection Zone, and alternative methods to provide FFP are not feasible, the applicant may apply to provide a Net Benefit. The applicant is directed to the "Dover/Plant City WUCA Supplemental Form" (Form No. LEG-R.050.00 (12/10)) and "Net Benefit Form Dover/Plant City WUCA" (Form No. LEG-R.051.00 (12/10)).

❑ **ANNUAL CROPS** – Blueberries, citrus, subtropical fruits (e.g., avocados, kiwi), deciduous fruit (e.g., peaches, Lychee nuts), pine or other evergreen trees, vineyards, commercial hay, pasture and sod are considered annual crops by the District, either because they are perennial or because they are typically replanted in the same season as harvested. Nurseries are addressed on page 4.

Complete the table below with information on supplemental irrigation for annual crops. Use a new line for each irrigation zone. Enter the same withdrawal point for as many zones as applicable. Do not include withdrawal points that are used only for frost/freeze protection.

ANNUAL CROPS SUPPLMENTAL IRRIGATION WATER DEMAND TABLE

District ID Number	Owner ID Number	Crop Type	Supplemental Irrigation Method	Irrigated Acres	Annual Avg. Demand (gpd)	Peak Month Demand (gpd)

ANNUAL CROPS TOTALS: _____ _____

If AGMOD was not used, what is the basis for the requested quantities (historic pumpage, etc.)?

_____

_____

_____

Frost/Freeze Protection (FFP) – List the withdrawal points used for FFP of the annual crops (commercial hay, pasture and sod do not require cold protection), and what type of auxiliary "irrigation" method (the manner to convey water to the plants for FFP) is used**.**

ANNUAL CROPS FROST/FREEZE PROTECTION WATER DEMAND TABLE

District ID Number	Owner ID Number	Crop Type	FFP Only Y / N	Auxiliary Irrigation Method *Low volume spray, sprinklers, etc.*	Maximum Daily (gpd)

Agriculture Supplemental Form

- ❑ **Citrus** – If there are other aspects of your citrus operation affecting water use that should be considered, such as under-drains, shallow root depth, etc., specify what they are and where they are located. Also describe any special features of your grove that may affect permitted quantities, such as typical resets per year, etc.

  ❑ N/A.

  _____

  _____

  _____

  _____

  _____

  _____

- ❑ **Blueberries** – If there are other aspects of your blueberry operation affecting water use that should be considered, specify what they are and describe how these affect permitted quantities.

  _____

  _____

  _____

  _____

  _____

  _____

- ❑ **Pasture** – Complete the table below for each withdrawal point used to irrigate improved pasture (conveyance system is installed). Irrigation quantities for non-improved pasture are not allocated.

PASTURE SUPPLEMENTAL IRRIGATION WATER DEMAND TABLE

District ID No.	Owner ID No.	Acres	Irrigation Method	Annual Average (gpd)	Peak Month (gpd)

Provide a detailed description of the irrigation system used for pasture irrigation, specifying pipe sizes and lengths, ditches, culverts, etc. Describe and reference on a map, all pipe, culvert and ditch lengths, invert

elevations and structures or devices. Add an attachment if necessary.

_____

_____

_____

_____

_____

Provide a sketch on a map (map required for the WUP application may be used) of the following:

- Irrigation system layout, including main piping and irrigation ditch locations
- Crop locations within the property

Last date (month/year) pasture was irrigated: _____

Indicate the average number of irrigation events per year: _____

Indicate the average number of hours per irrigation event: _____

❑ **NURSERIES** – Complete the table below with information on supplemental irrigation. Use a new line for each irrigation zone. Enter the same withdrawal point for as many zones as applicable. Plant types include bedding plants, blueberries, citrus, caladiums, cut flowers, deciduous trees, fruit trees (other than citrus nursery) and woody ornamental. Nursery types include container, field, greenhouse or shade house.

NURSERY SUPPLEMENTAL IRRIGATION WATER DEMAND TABLE

District ID Number	Owner ID Number	Plant Type	Nursery Type	Supplemental Irrigation Method	Irrigated Acres	Annual Avg. Demand (gpd)	Peak Month Demand (gpd)

NURSERIES TOTAL: _____ _____

Number of months nursery plants are under shade house: _____

Frost/Freeze Protection (FFP) – List the withdrawal points used for FFP of the nursery**.**

NURSERY FROST/FREEZE PROTECTION WATER DEMAND TABLE

District ID Number	Owner ID Number	Plant Type	FFP Only Y / N	Auxiliary Irrigation Method *low volume spray, sprinklers, etc.*	Maximum Daily Demand (gpd)

NURSERY FROST/FREEZE PROTECTION WATER DEMAND TABLE (continued)

- ❑ **SEASONAL CROPS** – Complete the table on the next page for each withdrawal point used to irrigate seasonal crops. Start a new line for each seasonal crop. If biofuel crops are grown, specify the crop type. If crop types are alternated, input the crop with higher irrigation needs. If a crop is an additional (second or third) crop immediately planted on the same field using the same irrigation system, please indicate by placing a "2" or a "3" after the crop type.

  Auxiliary Irrigation – Method used to prepare the beds for planting (raise the water table or create mounds), typically surface (seepage) or sprinkler and irrigation for crop establishment. Note, bed preparation and crop establishment quantities are included in the annual average and peak month allocations.

  Supplemental Irrigation – Method used to bring the water from the source to the plant roots.

  Plastic Mulch – Indicate with a "Yes" or "No" if impervious plastic sheeting is placed over the beds.

  Last Irrigation – this is the last day (mm/dd) supplemental irrigation is provided for this crop or this zone of crops.

SEASONAL CROPS IRRIGATION WATER DEMAND TABLE

District ID No.								
Owner ID No.								
Crop Type								
Acres								
Auxiliary Irrigation Method for Bed Preparation								
Plant Date *(mm/dd*								
Supplemental Irrigation Method								
Last Irrigation *(mm/dd)*								
Plastic Mulch (Yes/No)								
Annual Avg. Demand (gpd)								
Peak Month Demand (gpd)								

SEASONAL CROPS TOTALS: **Annual Average: _____** **Peak Month: _____**

- ❑ **Strawberries** – If different withdrawal points are used to prepare beds for planting than those used for regular (supplemental) irrigation, show the relationship of different withdrawal points used for different purposes for the same fields in the table below. For instance, if a withdrawal point (indicated by a District or Owner ID No.) is used for bed preparation using sprinklers, indicate its ID number in Columns A & B and put "sprinkler" in Column C on the same row. If a different withdrawal point is used for supplemental

irrigation of the same field using drip tubes under mulch, indicate its ID in Columns D & E on the same row, and put "drip under mulch" in Column F.

STRAWBERRY CROPS WITHDRAWAL POINT RELATIONSHIP TABLE

A	B	C	D	E	F
District ID Number	**Owner ID Number**	**Auxiliary Irrigation Method for Bed Preparation**	**District ID Number**	**Owner ID Number**	**Supplemental Irrigation Method**

Frost/Freeze Protection (FFP)– Indicate the irrigation method used to provide cold protection to the strawberry crop. If a withdrawal point is used only for FFP, indicate "Y" for" FFP Only"

STRAWBERRIES FROST/FREEZE PROTECTION WATER DEMAND TABLE

District ID Number	Owner ID Number	Auxiliary Irrigation Method for Frost/Freeze Protection *Low volume spray, sprinklers, etc.*	FFP Only Y / N	Maximum Daily Quantities (gpd)

CROP ROTATION – If crops are rotated, briefly describe how they are rotated from season-to-season and year-to-year (e.g., "*For Owner ID Number 1, melons are grown in field 'A' every 7 years. The first year, melons are grown; the second year is fallow; the third and fourth years, a noncommercial cover crop is grown; the fifth, sixth and seventh years, a commercial sod is grown.*"). Indicate the most water-intensive crop type at the withdrawal point with the most acreage so that all rotational crops are given sufficient irrigation quantities.

_____

_____

_____

_____

_____

❑ N/A Crops are not rotated.

SUBTOTAL IRRIGATION DEMAND

Annual Average _____ gpd Peak Month _____ gpd Maximum Daily _____ gpd

(Add Annual Crops, Nurseries, Pasture and Seasonal Crops)

❑ AQUACULTURE

Complete this section for all water needs associated with aquaculture (fish farming).

Florida Department of Agriculture and Consumer Services Aquaculture Certificate of Registration number (Rule 5L-3.003, Florida Administrative Code): _____

Check the types of operations that apply:

❑ **Commercial Food**

❑ **Feeder**

❑ **Commercial Tropical** (Live-bearing ____% Egg-bearing ____%)

❑ **Other** (describe)**:** _____

MAP: Provide a map that shows the water flow from withdrawal points to tanks, vats, raceways and ponds, and to discharge points. Number the tanks, vats, raceways, discharge points and ponds for reference to the tables on the next page. Include any recirculation and settling ponds that may exist. For each pond, indicate the volume, normal water elevation, overflow pipe or culvert bottom elevation, depth from ground surface at the edge of the pond (this may be a levee) to the pipe or culvert bottom. (The map that is required for the WUP application may be used for this purpose.)

❑ Attached.

ENCLOSURE TYPES: Provide information for the types of enclosures used in this operation. Only complete the section that pertains to the enclosure types in your operation.

❑ COVERED OR INDOOR TANKS/VATS

❑ **N/A** There are no covered or indoor tanks or vats. Skip to Ponds

Withdrawal Point Demand

On the table on the next page, provide the information requested in the first column for each withdrawal point under the "Owner ID Number" . The total volume of all tanks and vats for each withdrawal points is *length* x *width* x *depth from normal water elevation to tank/vat bottom.* Specify the map references for all tank/vat locations and discharge point locations that are associated with once-through continuous water flow. Demand for cleaning and maintenance of the facilities is addressed separately later in this application.

TANKS OR VATS WATER DEMAND TABLE

Row	Attributes	Owner ID Number	Owner ID Number	Owner ID Number	Owner ID Number
1	**District ID Number**				
2	**Number of Tanks/Vats**				
3	**Total Volume (cubic feet)**				

TANKS OR VATS WATER DEMAND TABLE (continued)

Row					
4	**Map Reference for Tanks/Vats**				
5	**Number of Times Per Year Total Water Change-Out**				
6	**Annual Average Change-Out Demand (gpd)**				
7	**Peak Month Change-Out Demand (gpd)**				
8	**Peak Month Change-Out Demand (gpd/month)**				
9	**Aeration System Type**				
10	**Evaporative and Seepage Replacement Quantities Annual Average (gpd)**				
11	**Evaporative and Seepage Replacement Quantities Peak Month (gpd)**				
12	**No. Hours Pumped for Cold/Heat Protection in 24-Hour Period**				
13	**Map Reference Number for Discharge Location**				
14	**Maximum Daily Quantity for Cold or Heat Protection (gpd)**				
15	**Number of Cold or Heat Protection Days/Year**				
16	**Annualized Total Quantity for Cold or Heat Protection ÷ 365 days (gpd)**				
17	**Total Annual Average (gpd)** (Add rows 6+10+16)				
18	**Total Peak Month (gpd)** (Add rows				

	Annual Average (gpd)	**Peak Month (gpd)**	**Maximum Daily (gpd)**
COVERED OR INDOOR TANKS/VATS TOTALS:	_____	_____	_____

❑ PONDS

❑ **N/A** There are no ponds. (Skip to Raceways.)

Withdrawal Point Demand

Provide information per withdrawal point about the water demands and operation of the ponds. Provide the volume as *length* x *width* x *depth from normal water elevation to pond bottom*. Specify the map reference numbers for the ponds that are serviced by that withdrawal point and the associated discharge point map reference. The levee height is the freeboard above the overflow pipe or culvert base height for the ponds. If a levee is present that allows the normal pond water level to be above the water table, include the amount of water lost via lateral seepage to that which is indicated as lost from the bottom of the pond. Divide the amount of water necessary to refill the ponds (after they are emptied for maintenance) between what is pumped in and what infiltrates into the ponds from the water table.

PONDS WATER DEMAND TABLE

Row	Attribute	Owner ID Number	Owner ID Number	Owner ID Number	Owner ID Number
1	**District ID Number**				
2	**Total Volume of Ponds Serviced** *(indicate units as* ft.^{3} or acre-ft)				
3	**Map References for Pond(s)**				
4	**Number of Times Per Year Total Water Change-Out**				
5	**Annual Average Gallons Per Day to Refill/Year** *(from pumped well)*				
6	**Annual Average Gallons Per Day to Refill/Year** *(from water table seepage)*				
7	**Peak Month Gallons Per Day to Refill/Year** *(from pumped well)*				
8	**Peak Month Gallons Per Day to Refill/Year** *(from water table seepage)*				
9	**Levee Height** (*ft. above normal pool elevation)*				
10	**Aeration System Type**				
11	**Annual Average Evaporation and Seepage Replacement Quantities (gpd)**				
12	**Peak Month Evaporation and Seepage Replacement Quantities (gpd)**				
13	**Total Annual Average (gpd)** *(Rows 5+11)*				
14	**Total Peak Month (gpd)** *(Rows 7+12)*				
15	**No. Hours Pumped for Cold/Heat Protection in 24-Hour Period**				
16	**Maximum Daily (gpd)** *(for cold/heat protection)*				
17	**Map Reference Number for Discharge Location**				

	Annual Average	Peak Month	Maximum Daily
PONDS TOTALS (GPD):	_____	_____	_____

If spray or sprinklers are used for aeration, provide an operation schedule specifying time and quantities used:

_____

_____

_____

_____

❑ COVERED RACEWAYS

Sub-group raceways by their flow requirements (continuous flow once-through or continuous flow recirculation) and group under the withdrawal points that supply water to them. Provide the volume *(length* x *width* x *depth)* in cubic feet. Specify the number of raceways in each group and indicate flow (in gallons per day) of water required for each group. The maximum daily demand are those required for cold or heat stress protection. Show the reference number for the discharge locations on the map. **Note:** If raceways are not continuous flow, include in "**Covered or Indoor Tanks/Vats**" section above. Water demand for cleaning and maintenance of the facilities is addressed separately below.

COVERED RACEWAYS WATER DEMAND TABLE

District ID No.	Owner ID No.	No. of Race-ways	Map References for Raceways	Check The Type Of Flow In The Raceway	Total Volume ($ft.^3$)	Map Reference Discharge Location	Annual Average (gpd)	Peak Month (gpd)	Maximum Daily (gpd)
				❑ *Once-through* ❑ *Recirculation*					
				❑ *Once-through* ❑ *Recirculation*					
				❑ *Once-through* ❑ *Recirculation*					
				❑ *Once-through* ❑ *Recirculation*					
				❑ *Once-through* ❑ *Recirculation*					

COVERED RACEWAYS TOTALS (gpd) : _____ _____ _____

❑ OTHER AQUACULTURE WATER USES

Indicate other water demands for each activity, such as for egg incubation and sorting; special needs for fry; washing and maintenance of equipment and facilities; shipping and transport containers; effluent (production unit water) treatment; etc.

OTHER AQUACULTURE WATER DEMAND TABLE

District ID Number	Owner ID Number	Activity	Annual Average (gpd)	Peak Month (gpd)

OTHER AQUACULTURE TOTAL: _____ _____

SUBTOTAL AQUACULTURE DEMAND:

(Add Tanks/Vats, Ponds, Raceways and Other Aquaculture totals)

Annual Average (gpd) _____

Peak Month (gpd): _____

Maximum Daily (gpd) : _____

❑ NON-IRRIGATION – (Barn / In-Field Product Processing)

Indicate water requirements for non-irrigation and non-livestock activities in the following table. These include in-field washing and packing of crops, cleaning and maintenance at the barn, product washing and/or packaging at the barn, and tank filling for "fertigation" and "chemigation" of crops. Note, human potable/sanitary needs are addressed later in this form.

Note: Do not include off-site packing and processing — these should be addressed in the **Industrial or Commercial Supplemental Form.**

NON-IRRIGATION/ NON-LIVESTOCK WATER DEMAND TABLE

District ID Number	Owner ID Number	Water Use	Annual Average (gpd)	Peak Month (gpd)

TOTAL NON-IRRIGATION DEMAND: _____ _____

❑ LIVESTOCK OTHER THAN DAIRY

Complete the table below for all livestock types.

Note: Any water needs associated with the horse racing industry are to be included on the **Recreation or Aesthetic** supplemental form.

LIVESTOCK OTHER THAN DAIRY WATER DEMAND TABLE

District ID Number	Owner ID Number	Livestock Type	No. Head	Annual Average (gpd)	Peak Month (gpd)

TOTAL LIVESTOCK DEMAND: _____ _____

Agriculture Supplemental Form

Describe how water is provided to livestock, the volume of containers or ponds filled, and how often water sources are refilled. This will help to estimate the amount of water needed.

_____

_____

_____

❑ DAIRY FARMING

Complete the table below with information regarding water requirements at the dairy. If feed is grown on-site, complete the irrigation section for the water requirements for these crops. List a water use more than once if more than one withdrawal point is used. Typical water uses include animal drinking, animal cleaning, equipment and facility cleaning, product cooling, etc.

Number of head dairy cows: _____

DAIRY OPERATION WATER DEMAND TABLE

District ID Number	Owner ID Number	Water Use	Annual Average Demand (gpd)	Peak Month Demand (gpd)

TOTAL DAIRY DEMAND: _____ _____

PART III. OTHER WATER DEMANDS

If information for these three water use categories is provided on another supplemental form, it is not necessary to complete it here.

FIRE FLOW – If fire protection is provided from an on-site water source, indicate the annual average and peak month daily quantities necessary in the table below.

❑ Not applicable; fire protection is provided by a public supply utility.

FIREFLOW WATER DEMAND TABLE

District ID Number	Owner ID Number	Annual Average Demand (gpd)	Peak Month Demand (gpd)

FIRE FLOW TOTAL: _____ _____

CALCULATIONS: Show the calculations for the quantities requested for annual average and peak month water demand (if more space is needed, attach documents):

_____

_____

_____

_____

_____

LAWN AND LANDSCAPE IRRIGATION – Indicate lawn and/or ornamental landscape irrigation needs. Types of plants are grass or ornamental landscape. Irrigation methods are usually general spray or impact sprinkler.

LAWN AND LANDSCAPE IRRIGATION WATER DEMAND TABLE

District ID Number	Owner ID Number	Acres	Supplemental Irrigation Method	Annual Avg. Demand (gpd)	Peak Month Demand (gpd)

LAWN AND LANDSCAPE IRRIGATION TOTAL: _____ _____

Documentation Of Lawn/Landscape Irrigation Quantities

Attach documentation for the quantities requested. If you used the District's irrigation calculation program, AGMOD, attach the output to this form.

- ❑ Attached
- ❑ Not applicable; irrigation water is not provided from withdrawal facilities on this property.

POTABLE/SANITARY REQUIREMENTS – If potable/sanitary needs of employees are provided from an on-site water source, complete the table below using general employee numbers per shift.

- ❑ Not applicable; potable/sanitary needs are provided by a public supply utility.

POTABLE/SANITARY WATER DEMAND TABLE

	District ID Number	Owner ID Number	Employees/ visitors per shift	Workdays per week	Annual Average Demand (gpd)	Peak Month Demand (gpd)
Shift 1:						
Shift 2:						
Shift 3:						

POTABLE/SANITARY TOTAL: _____ _____

SUBTOTAL "OTHER" DEMAND:
(Add Fire Flow, Lawn/Landscape and Potable/Sanitary totals)

Annual Average (gpd): _____

Peak Month (gpd): _____

TOTAL AGRICULTURAL WATER DEMAND:

(Add all subtotals and subtract any water provided by a drainage or water control district as indicated on page 1.))

Annual Average (gpd): _____

Peak Month (gpd): _____

Maximum Daily (gpd): _____

PART IV. WATER CONSERVATION

All applicants for an Individual or General Water Use Permit must submit a water conservation plan that completely describes current and proposed water conservation actions. Follow the instructions for your type of use.

Water Conservation Plan for Agricultural Water Use (Excluding Aquaculture)

New Application: Submit a water conservation plan specifically addressing the water conservation practices listed below and indicate those that will be implemented (include a schedule), those that are not applicable for the commodity being produced, or are not environmentally, technically or economically feasible (include documentation). The plan shall include a description of each water conservation measure, an estimate of water savings from each, and implementation dates for each.

Renewal or Modification Application: Applicants to renew or modify Individual or General Water Use Permits for agricultural use shall also include a water conservation report that describes the water conservation measures that have been implemented and associated water savings that have been achieved from each.

Water Conservation Practices:

1. Conduct an ongoing maintenance and repair program on the irrigation system, including a system-wide survey conducted at least once per season that includes monitoring flow rates and system pressures to detect leaks and clogs; routine cleaning system components (nozzles, valves, filters, meters, etc.); checking controllers or timers for accurate operation; and monitoring flow meters for unusually high or low readings.
2. Conduct an ongoing analysis of the irrigation system efficiency, including conveyance, distribution and application, and if storage ponds or reservoirs are used, an analysis of storage efficiencies. The analysis shall include periodic testing for application and distribution uniformity and system maintenance to irrigate efficiently.
3. Evaluate the feasibility of improving the efficiency of the current irrigation system, converting to a more efficient irrigation system, or installing tailwater recovery or stormwater ponds. Implement the improvements, conversion and/or installation when it is operationally and economically feasible.
4. Implement an irrigation schedule that maximizes the efficiency of delivering the correct quantity of water to the root zone at the time it is needed. This practice shall include the use of tools to determine when and how much irrigation water is needed. Example of these tools include soil moisture sensors, weather stations or other climatic measuring devices, and piezometers to monitor the water table elevation.
5. Avoid daytime irrigation, aeration or other activities that involve spraying water into the air to the greatest extent practicable to minimize water losses from evaporation and the wind. This does not apply to daytime use of water for control of heat stress, frost/freeze protection, plant establishment, field bedding, erosion control, system maintenance or other necessary non-irrigation uses.
6. Reduce or eliminate irrigation runoff by monitoring irrigation duration so that only the water necessary for optimum plant growth is used, avoiding irrigation of non-crop areas, and collecting irrigation tailwater for reuse.

Water Conservation for Aquaculture Water Use

New Application: Submit a water conservation plan specifically addressing the water conservation practices listed below and indicate those that will be implemented (include an implementation schedule), are not applicable for the product being produced, or are not environmentally, technically or economically feasible (include documentation of infeasibility). The plan shall include a description of each water conservation measure, an estimate of water savings from each, and implementation dates for each.

Renewal or Modification Application: In addition to the requirements for New applicants, applicants to renew or modify Individual or General Water Use Permits for aquaculture use shall also include a water conservation report that describes the water conservation measures that have been implemented and associated water savings that have been achieved from each.

Water Conservation Practices:

1. Reduce offsite discharge by converting flow through systems to recirculation systems; designing new facilities with recirculation systems and design new ponds without discharge outlets; retaining and treating production water on site; utilizing reclaimed water and other alternate water sources; and incorporating water reuse practices in standard operation and management practices to reduce the quantity of water pumped or discharged.
2. Reduce water loss from ponds due to excess seepage by maintaining proper free board levels, using perimeter ditches, and reduce water loss from outdoor containments by the use of shade facilities.
3. Avoid daytime aeration or other activities that involve spraying water into the air to the greatest extent practicable to minimize water losses from evaporation and the wind. This does not apply to daytime use of water for control of heat stress or cold protection.
4. Conduct routine and ongoing maintenance and repair programs on levees, dikes and banks surrounding ponds, check for leaks from tanks, vats or raceways, and check for proper performance of perimeter ditches, filter strips, detention ponds or other facilities designed for treatment of product water.
5. Conduct a system-wide survey at least once per season that includes monitoring flow rates and system pressures to detect leaks and clogs; routine cleaning system components (valves, filters, meters, etc.); checking controllers or timers for accurate operation; and monitoring flow meters for unusually high or low readings.
6. Utilize other conservation practices as identified by the University of Florida's Institute of Food and Agricultural Science's Department of Fisheries and Aquatic Sciences publication "Regulations Pertaining to Non-native Fish in Florida Aquaculture (FA121)."

Southwest Florida
Water Management District
WATERMATTERS.ORG · 1-800-423-1476