

**Individual Environmental Resource
Agricultural Systems Permit Application
Chapters 40C-4, 40C-41, and 40C-44, F.A.C.**

St. Johns River Water Management District
Department of Resource Management
P. O. Box 1429, Palatka, FL 32178-1429

Number _____
Fee Received _____
Reviewer _____

Application is for: _____ Operation _____ Maintenance _____ Alteration
 _____ Construction _____ Modification _____ Conceptual Approval

Status of Agricultural Operation: _____ Existing _____ New

OWNER

Name of Owner _____
Address _____
City _____ County _____
State _____ Zip Code _____ Telephone No. _____

APPLICANT/OPERATOR/ENTITY TO RECEIVE PERMIT

Name of Applicant _____
Address _____
City _____ County _____
State _____ Zip Code _____ Telephone No. _____

ENGINEER OR SCS DISTRICT CONSERVATIONIST

Name of Agent _____
Address _____
City _____ County _____
State _____ Zip Code _____ Telephone No. _____

ATTORNEY OF RECORD, if Applicable

Name of Firm _____
Name of Firm Contact _____
Address _____
City _____ County _____
State _____ Zip Code _____ Telephone No. _____

PROJECT INFORMATION

Name of Agricultural Operation _____
Address _____
City _____ County _____
State _____ Zip Code _____ Telephone No. _____
USGS Topo Quad Map _____
Total Acreage _____
Section(s) _____ Township _____ Range _____

MAINTENANCE AND OPERATION ENTITY

Name _____

Address _____

City _____ County _____

State _____ Zip Code _____ Telephone No. _____

Applicant's Name (print) Applicant's Signature Date

Agent's Name (print) Agent's Signature Date

EXISTING AGRICULTURAL OPERATIONS
(for maintenance, operation and minor alteration only)

PROVIDE 3 COPIES OF ALL DOCUMENTS, PLANS, CALCULATIONS AND AERIAL PHOTOGRAPHS

- A. Provide a general location map (USGS 7 ½' Quadrangle) delineating the agricultural operation and nearby highways and water bodies.
- B. Complete the Notice of Receipt of Application.
- C. Describe the nature and extent of the existing agricultural operation. Provide extra sheets, maps, or drawings, as necessary.
 - 1. Provide a map, or maps, delineating:
 - a. Property boundaries of the agricultural operation.
 - b. The existing topography, drainage patterns and basin boundaries within the agricultural operation. Identify and quantify the area of any lands outside the agricultural operation which contribute runoff to the agricultural operation.
 - c. The existing land use (crop) or land cover.
 - d. The location of existing surface water works (ditches, canals, levees, pumps, ponds, irrigation gates, etc.).
 - e. Rights-of-way and easements for the existing drainage system, if any.
 - f. Soil types used to determine hydrologic soil group.
 - g. For agricultural operations proposing minor alteration, wetlands delineated on a land cover map.
 - 2. Provide drawings depicting existing surface water works (ditches, canals, levees, pumps, ponds, outfall structures, irrigation gates, etc.). Provide approximate levee cross-sections and top elevations, ditch and canal side slopes and bottom elevations, pump intake inverts, irrigation gate inverts, discharge structure control elevations, etc., with supporting documentation.
 - 3. Provide all available pump hour records or maintenance records to document the level and frequency of pump use. Provide pump curves, flow measurements or other information to document pump capacity.
 - 4. Provide all available records of pond stages.
 - 5. Describe any existing treatment facilities (ponds, grassed waterways, overland flow areas, wetland filtration, etc.) for the agricultural operation.
 - 6. Provide copies of all available water quality data which characterizes discharge off-site (to surface or groundwater). For data which has been supplied to the District previously in compliance with a permit condition or Consent Order, reference to the appropriate permit number is sufficient.
 - 7. Is the agricultural operation used for disposal or reuse of domestic wastewater or sludge? If yes, provide copies of relevant documents or contracts.
 - 8. Provide the name(s) of the water body which receives discharge from the system.
 - 9. Describe the existing agricultural operation (type of crop or commodity, acreage of each crop, irrigation methods, etc.). Complete Page 9 or 10, if applicable.
- D. Indicate any previous or existing District permits or consent orders for this project area. Include issuance and expiration dates.

- E. Does the agricultural operation have a currently valid Conservation Plan? To what extent has the Conservation Plan been implemented? Attach a copy of the Conservation Plan, if available.
- F. Develop a monthly water budget for the agricultural operation for an average rainfall year. The water budget should be a composite of water budgets developed for each land use. Include all sources of incoming water, the proportion of rain that is effective and the portion that would run off, and all mechanisms by which water is removed.
1. Parameters which must be considered for land areas are:
 - a. Rainfall
 - b. Effective rainfall
 - c. Surface runoff entering from other sites
 - d. Incoming groundwater seepage
 - e. Irrigation volume (gross and net) from surface sources
 - f. Irrigation volume (gross and net) from groundwater sources
 - g. Irrigation efficiency, based on irrigation method
 - h. Potential evapotranspiration
 - i. Actual evapotranspiration
 - j. Excess water leaving the fields/groves
 2. Parameters which must be considered for water bodies (ponds):
 - a. Rainfall
 - b. Evaporation
 - c. Water volume returned to fields
 - d. Water stage
 - e. Stored volume
 3. For each parameter, give the reference or methodology used to determine its value. Clearly state acreage for each land use and water body. Select the first month of the water budget such that the assumed initial volume of the on-site water bodies is equal to their final volume. Show computational checks on the overall water budget and the individual water budgets for each field or water body.
 4. Compute the decrease in off-site discharge credited to any detention ponds.
- G. If applicable, describe minor alterations needed to implement a management practice recommended by a Conservation Plan or listed in Section 40C-44.026, F.A.C. If the applicant is not the property owner (e.g., property lessee), provide lease agreement or other document which authorizes the proposed alterations.

PROPOSED AGRICULTURAL OPERATION
(for construction or major alterations)

PROVIDE 3 COPIES OF ALL DOCUMENTS, PLANS, CALCULATIONS AND AERIAL PHOTOGRAPHS

- A. Provide a general location map (USGS 7 ½' Quadrangle) delineating the proposed agricultural operation and nearby highways and water bodies.
- B. Complete the Notice of Receipt of Applications
- C. Provide pre-development site information, including:
 - 1. A map, or maps of the same scale, of the project area and vicinity (at a scale no smaller than one inch equals 800' and on a sheet(s) no larger than 24" x 36") delineating:
 - a. Project boundaries of the proposed agricultural operation
 - b. Existing land use or land cover
 - c. Existing topography, drainage patterns and basin boundaries within the agricultural operation
 - d. The area of any lands outside the agricultural operation which contribute runoff to the agricultural operation
 - e. The existing surface water works (ditches, canals, levees, pumps, ponds, irrigation gates, etc.)
 - f. Rights-of-way and easements for the existing drainage system, if any
 - g. Wetlands delineated on a land cover map at the same scale as the site plan
 - h. Soil types used to determine hydrologic soil group
 - i. Normal and wet season water table elevations
 - j. Ten year and, if applicable, 100 year flood elevation and floodplain boundary of any lake, stream or other watercourse located on or adjacent to the site
 - k. Limits of waters of the state
 - 2. Provide a recent aerial photograph at the same scale as the site plan, with project boundaries delineated on the photograph.
- D. Provide a description of the on-site wetlands, including:
 - 1. The acreage of wetlands existing on the site
 - 2. A discussion of the proposed alterations or disturbances to the wetland areas
 - 3. A discussion of the wetlands that will be preserved in their natural or existing state
- E. Provide post-development site information, including construction plans and specifications (on sheets no larger than 24" x 36"). Include:
 - 1. Proposed land use and land cover. Describe the proposed agricultural operation (type of crop or commodity, acreage of each crop, irrigation methods, etc.). Complete Page 9 or 10, if applicable.
 - 2. Proposed construction schedule, including sequence of any major phases, an estimated start and completion date.

3. Location, size and design capacity of all surface water works (ditches, canals, levees, pumps, ponds, outfall structures, irrigation gates, etc.).
 4. Location and details of all water control structures, control elevations of the control structures, and any seasonal water level regulation schedules.
 5. Post-development drainage basin boundaries showing the direction of flows, taking into account any off-site runoff being directed through or around the system.
 6. Location of all water bodies, with details of size, side slopes and depths.
 7. Provide pump specifications and operating curves for a range of possible operating conditions.
 8. Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes.
 9. Any temporary construction which might affect the surface water management system prior to completion of the system.
 10. All erosion and sediment control measures to be implemented during each phase of construction prior to completion of the system, intended to prevent violations of state water quality standards.
 11. Proposed maintenance practices and schedules
 12. If applicable, proposed wetland mitigation plans and details
- F. Indicate any previous or existing District permits or consent orders for this project area. Include issuance and expiration dates.
- G. Provide design analysis, including:
1. Pre-development and post-development drainage calculations as follows:
 - a. Runoff characteristics, including area, runoff curve number or runoff coefficient, SCS hydrologic soil group and time of concentration for each drainage hydrologic unit
 - b. Water table elevations (normal and average wet season) including aerial extent and magnitude of any proposed water table drawdown.
 - c. Receiving water elevations (normal, wet season, design storm).
 - d. Design storms used including duration, frequency, and time distribution.
 - e. Runoff hydrograph(s) for each drainage basin for all required storm events.
 - f. State-storage computations for any storage area, such as a reservoir, detention area or channel storage, used in storage routing.
 - g. Stage-discharge computations for any storage areas at a selected control point, such as structure control or natural restriction.
 - h. Flood routings through on-site conveyance and storage areas.
 - i. Water storage profiles and elevations in the primary surface water management system for the required design storm event(s).
 - j. Runoff peak rates and volumes discharged from the system for the design storm event(s).
 2. Calculations to demonstrate water quality treatment in compliance with Section 40C-44.026.
 3. Engineering analysis of floodplain storage and conveyance, if applicable, including:

- a. Hydraulic calculations for all proposed traversing works.
 - b. Backwater water surface profiles showing upstream impact of traversing works.
 - c. Location and volume of encroachment with 10 year floodplain.
 - d. Plan for compensating storage.
4. Provide a description of the engineering methodology, assumptions and references and a copy of all such computations, engineering plans and specifications used to analyze the system. If a computer program is used for the analysis, provide the name and a description of the program.
- H. Develop a monthly water budget for the agricultural operation for an average rainfall year. The water budget should be a composite of water budgets developed for each land use. Include all sources of incoming water, the proportion of rain that is effective and the portion that would run off, and all mechanisms by which water is removed.
 1. Parameters which must be considered for land areas are:
 - a. Rainfall
 - b. Effective rainfall
 - c. Surface runoff entering from other sites
 - d. Incoming groundwater seepage
 - e. Irrigation volume (gross and net) from surface sources
 - f. Irrigation volume (gross and net) from groundwater sources
 - g. Irrigation efficiency, based on irrigation method
 - h. Potential evapotranspiration
 - i. Actual evapotranspiration
 - j. Excess water leaving the fields/groves
 2. Parameters which must be considered for water bodies (ponds):
 - a. Rainfall
 - b. Evaporation
 - c. Water volume returned to fields
 - d. Water stage
 - e. Stored volume
 3. For each parameter, give the reference or methodology used to determine its value. Clearly state acreage for each land use and water body. Select the first month of the water budget such that the assumed initial volume of the on-site water bodies is equal to their final volume. Show computational checks on the overall water budget and the individual water budgets for each field or water body.
 4. Compute the decrease in off-site discharge credited to any detention ponds.
- I. If the applicant is not the property owner (e.g., property lessee), provide a lease agreement or other document which authorizes the proposed construction or major alterations.

J. Provide Special Basin Information, including:

1. Wekiva Recharge Protection Basin – For projects within the Wekiva Recharge Protection Basin (basin boundary defined in Chapter 40C-41, F.A.C.), provide design analysis to demonstrate compliance with Wekiva Recharge Protection criteria, including: pre- and post-development recharge from the project area.
2. Lake Apopka Hydrologic Basin – For projects within the Lake Apopka Hydrologic Basin (basin boundary defined in Chapter 40C-41, F.A.C.) or that will discharge water to Lake Apopka or its tributaries, provide design analysis to demonstrate compliance with the Lake Apopka Hydrologic Basin criteria, including: pre-development total phosphorus and post-development total phosphorus discharged from the project area.

SUMMARY OF LAND USE AND AGRICULTURAL PRACTICES

ROW CROPS AND CITRUS

Typical Year

Parcel # _____

Acreage = _____

	Jan.	Feb.	March	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.
Crops For the Year planting dates harvesting dates												
Seed Bedding and Cultivation dates type depth												
Fertilizer dates types rates												
Pesticides dates types rates												
Desired Water Table Depths during cropping during fallow												
Irrigation dates amount irrigation method water source												

Note: Parcel = land under the same crops and cultivation practices during the year.

- 1) For each parcel provide the crops' names and planting and harvesting dates for each.
- 2) For each parcel describe the seedbed preparation and cultivation practices. Show the time of these operations.
- 3) For each cropping and fallow period give the expected fertilization and pesticide application rates and dates.
- 4) For each cropping and fallow period give the desired water table depth.
- 5) For each crop estimate dates of irrigation and amount. Identify the water source and describe the irrigation method.
- 6) Identify each parcel on a map.

SUMMARY OF LAND USE AND AGRICULTURAL PRACTICES
PASTURE
Typical Year

Parcel # _____

Acreage = _____

	Jan.	Feb.	March	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.
Pasture Rotation and Animal Density												
Type of Vegetation And Condition												
Schedule of Pasture Management Practices (mowing, seeding, etc.)												
Fertilizer dates types rates												
Pesticides dates types rates												
Desired Water Table Depths during cropping during fallow												
Irrigation dates amount irrigation method water source water source												

Note: Parcel = land under the same crops and cultivation practices during the year.

- 1) For each parcel indicated the months of the year that the pasture is grazed and the number of cow/calf unit per acre.
- 2) Indicate the type and condition of the vegetation within each parcel.
- 3) For each parcel indicate the months when selected pasture management practice (mowing, burning, disking, seeding, etc.) typically occur.
- 4) For each parcel give the expected fertilization and pesticide application rates and dates.
- 5) For each parcel give the desired water table depth.
- 6) For each parcel estimate dates of irrigation and amount. Identify the water source and describe the irrigation method.
- 7) Identify each parcel on a map.

Environmental Resource Agricultural Notice of Receipt of Application

This information is required in addition to that required in other sections of the application.
Please submit five copies of this notice of receipt of application and all attachments.
Please submit all information on 8 ½" x 11" paper.

Project Name: _____

County: _____

Owner: _____

Applicant: _____

Applicant's Address: _____

1. Indicate the project boundaries on a USGS quadrangle map reduced or enlarged as necessary to legibly show the entire project. If not apparent from quad map, attach a location map showing a north arrow and a graphic scale; Section(s), Township(s), and Range(s); and sufficient detail to allow a person unfamiliar with the site to find it.
2. Provide the names of all wetland, or other surface waters that would be dredged,, filled, impounded, diverted, drained, or would receive discharge (either directly or indirectly), or would otherwise be impacted by the proposed activity, and specify if they are in an Outstanding Florida Water or Aquatic Preserve:

3. Attach a depiction (plan and section views, which clearly shows the works or other facilities proposed to be constructed. Use a scale sufficient to show the location and type of works. Use multiple sheets, if necessary.
4. Briefly describe the proposed project (such as "construction a deck with boatshelter", "replace two existing culverts", "construct surface water management system to serve 150 acres residential development"):
5. Specify the acreage of wetlands or other surface waters, if any, that are proposed to be disturbed, filled, excavated, or otherwise impacted by the proposed activity:
6. Provide a brief statement describing any proposed mitigation for impacts to wetlands and other surface waters (attach addition sheets if necessary):

FOR AGENCY USE ONLY

Application Name: _____

Application Number: _____

Office where the application can be inspected: _____

Date to be posted: _____ Date to be removed _____