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Handbook of Florida Water Regulation: Groundwater Discharge Regulations at the State Level[1]

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Preface

This handbook is designed to provide an accurate, current, and authoritative summary of the principle Federal and Florida laws that directly or indirectly relate to agriculture. This handbook should provide a basic overview of the many rights and responsibilities that farmers and farmland owners have under both Federal and Florida laws as well as the appropriate contact information to obtain more detailed information. However, the reader should be aware that because the laws, administrative rulings, and court decisions on which this handbook is based are subject to constant revision, portions of this publication could become outdated at anytime. Several details of cited laws are also left out due to space limitations.

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How Does Florida Regulate Groundwater Discharge?

Florida regulates groundwater discharge by two methods as follows:

1. *Discharge of waste* into state waters is prohibited unless permitted by a state agency. Because underground water is included in the definition of water, this also applies to groundwater. A discharge activity will not be permitted if contaminants reduce ground or surface water quality below the required Florida Department of Environmental Protection (DEP)

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classification standard. A contaminant is any substance that is harmful to plant or animal life.

2. *Application of chemicals* to control insect and aquatic weeds for agricultural purposes is exempt. However, the chemicals must be approved for the particular use by the Environmental Protection Agency (EPA) or the Florida Department of Agriculture and Consumer Services (DACS). Application must be made according to the label and state standards as well as part one of the Florida Pesticide Law (Chapter 487, Florida Statutes) must be followed.

What Are Groundwater Classifications?

Groundwater is classified into five categories (Classes F-1,G-1,G-2, G-3,G-4) based first on whether the water is potable (drinkable) or non-potable, then on the total of dissolved solids the water contains and whether they are located in confined or unconfined aquifers [FAC 62-520.410(1),]. Under the classification scheme, Class F-1 waters are potable, groundwater in a single source aquifer, which has a total dissolved solids content of less than 3,000 mg/l and was specifically reclassified as Class F-I by the Environmental Regulation Commission (ERC). Examples of F-1 waters include the surficial aquifers in northeast Flagler County. *Aquifers* (geographic formations that supply groundwater to wells, springs, or surface waters) retain the highest protection and are known as G-1 waters. Class G-4 waters are non-potable, located in confined aquifers only, and receive the least amount of protection. Unconfined groundwater always receives more protection as it is susceptible to contamination from another aquifer.

Groundwater quality standards include the following:

- *Minimum criteria*. This requires that all groundwater must not be contaminated by carcinogenic or toxic substance discharges.
- *Maximum contaminant*. This standard represents the maximum amount of particular contaminants that will be tolerated in a particular class of water. Maximum contaminant levels (Primary Drinking Water Standards) are generally in accord with EPA standards contained in the Federal Safe Drinking Water Act. Permits will not be issued under Chapter 403, Florida Statutes, Section 403.088, when maximum contaminant levels are exceeded by a discharge activity.

Secondary standards are also monitored in new facilities for compliance. Existing facilities are exempted from monitoring and compliance with the secondary standards.

Under Chapter 403, Florida Statutues, Section 403.087, discharge permits for stationary installations (structures that may emit water contaminants in quantities prohibited by the rules) are required. Agricultural water management systems are exempt from this requirement under Chapter 403, Florida Statutes, Section 403.927(2), but are regulated pursuant to Chapter 373, Florida Statutues, Section 373.019. However, the ultimate point of discharge is still regulated by DEP. Subsequently, when a farming activity pollutes water bodies outside the system, or the groundwater is polluted due to leaching which causes distant points in the aquifer to be polluted, the farmer may be liable.

The Water Management Districts (WMD) have the power to control consumptive uses of groundwater in areas of known groundwater contamination. In other words, through Chapter 373, Florida Statutes, Sections 373.036-.0698, the WMDs can restrict consumptive use through permitting when contamination is found.

Does Groundwater Discharge Include Stormwater Runoff?

Storm water runoff is water flowing off the land into streams and the ground after a rainstorm. This stormwater is often contaminated with the chemicals and products used on the land off which the stormwater runs.

EPA regulates stormwater discharges associated with agriculture. At the time of publication, EPA exempts from permitting agricultural stormwater discharges and agricultural return flows composed entirely of return flow from irrigated areas. However,

EPA does not exempt agricultural return flows that are not composed entirely of return flows from irrigated agriculture. For instance, a ditch containing fertilizers or pesticides entering navigable waterways is subject to the permitting requirements of the Clean Water Act. EPA has stricter stormwater runoff requirements for industrial and municipal runoff.

It is also important to note that the building of a structure (barn, stables, etc) that disturbs more that one acre of ground (digging a foundation, setting pilings, etc) needs a stormwater permit, but only for the phase of active construction. Once construction is finished the stormwater permit is terminated.

What Are the Permit Requirements?

Generally, permits will be issued only when an applicant can establish that the activity or installation in question will not degrade receiving waters below applicable standards. Test results and the installation of pollution control equipment are often required to guarantee such claims. The burden of proving entitlement to a permit is on the applicant.

In its rules, DEP expressly provides that groundwater discharge considerations are to be incorporated into existing permit requirements. The main purpose of this rule is to prohibit discharging into groundwater where the discharge causes a violation of the water quality standards and groundwater minimum criteria. However, a *zone of discharge* (also known as a "mixing zone") may be established by permit or rule. A zone of discharge is a predefined three-dimensional area in the ground around an installation where more primary and secondary groundwater quality standards do not apply and effluents have an opportunity to diffuse or degrade somewhat before leaving the boundaries of the zone of discharge.

Four activities are currently exempt from permitting requirements:

1. Agricultural fields.
2. Ditches and canals.
3. Livestock waste lagoons (those used in large dairies need permits; medium and small dairies are currently in DEP's rulemaking process).
4. Stormwater facilities (special limitations apply).

Concerning non-point source pollution of water from the above four agricultural activities, DEP regulations state that when discharges from these bodies (e.g., canals and lagoons) reach common waters (e.g., rivers, lakes, and groundwater) the standards increase for pesticide residues and other contaminants. This rule requires the revocation of the exemption and requires a permit when an activity causes pollution. Also, contaminating common waters can result in both criminal and civil penalties. Farmers may gain the best results by following Best Management Practices in order to alleviate these problems.

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