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## INTEROFFICE MEMORANDUM

**INFORMATION  
HSES 10-005**

**DATE:** June 11, 2010

**TO:** County Health Department Directors/Administrators  
Attention: Environmental Health and Engineering Directors

**THROUGH:** Lisa Conti, D.V.M., M.P.H., Dipl. ACVPM, CEHP  
Director, Division of Environmental Health

**FROM:** Gerald R. Briggs, Chief, Bureau of Onsite Sewage Programs

**SUBJECT:** Surface Water Boundary Determinations

### INFORMATION ONLY

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This memo rescinds and replaces Information Memorandums HSES 00-011 and 09-006. On June 18, 1999, statutory and rule changes were made regarding determination of surface water boundaries. A surface water body is defined as a "permanent non-tidal surface water body" or a "tidally influenced surface water body".

The boundary of a tidally influenced surface water body is the "mean high water line", (MHWL). The MHWL is an elevation derived from Mean High Water Surveys or studies currently based on the National Tidal Datum Epoch 1983-2001 (NTDE 83-01). These surveys reference the North American Vertical Datum adjustment of 1988 (NAVD88) and the unit of measurement is feet. Determination of the MHWL requires an elevation which must be established by Professional Surveyors and Mappers.

The boundary of a Permanent Non-tidal Surface Water Body (PNSWB) is the "mean annual flood line" (MAFL). Section 381.0065(2) (i) and (k), Florida Statutes, define the "mean annual flood line" and the "permanent non-tidal surface water body", respectively. In addition, rule 64E-6.002(34), FAC, defines the MAFL indicators that are referenced in the statutory definition. The MAFL can be established by Professional Surveyors and Mappers or at the option of the applicant, department personnel. In MAFL determinations, elevations may reference NAVD88 or may be established as "assumed elevations". The assumed elevation must be set using a permanent benchmark and when an elevation is used, it must be set by Professional Surveyors and Mappers. When establishing MAFL boundaries, department personnel do not use or set elevations but rather set the boundary by referencing specific indicators identified through field verification.



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For new and existing/modifications applications, the boundaries of all surface water bodies must be shown to scale and correctly labeled on the site plan. Once the boundary is shown on the site plan, proper setbacks from the system can be determined, unobstructed area calculated and for the purposes of sewage flow allowances, the area of the surface water body is deducted from the overall property size. **Site plans for new and existing/modifications must be drawn to scale, however, if the surface water boundary is beyond but within 75 feet of the applicant's lot, it must be shown with dimensions on the site plan but need not be drawn to scale.** For individual lots that are 5 acres or greater, it must be shown if within 75 feet of the minimum area that is required to be depicted.

For system repairs, surface water boundaries must be identified in order to measure setbacks only and are not required for authorized flow and unobstructed area determinations. Current regulations require a 75 foot setback from the surface water body boundary. Lots platted prior to 1972 are subject to a minimum 50 foot setback. **In repair cases any surface water boundary within the required setback plus 25 feet shall be considered "in proximity" to the onsite system and must be shown on the site plan. The site plan need not be drawn to scale but must show the "in proximity" dimensions to the surface water body.**

#### Mean High Water Line Determinations

The determination of the mean high water line (MHWL) for tidally influenced surface water bodies is governed by Chapter 177, Florida Statutes. The statute only allows Licensed Professional Surveyors and Mappers to determine the MHWL. The Florida Department of Environmental Protection (DEP) maintains information on MHWLs on state lands based on tidal datum from over 19 year epochs. MHWLs are specific elevations. DEP also allows a mathematical calculation and in these cases, a DEP letter is necessary to validate the MHWL elevation. Questions regarding MHWL determinations can be researched using the DEP online Land Boundary Information System (LABINS) at <http://data.labins.org> or by calling or emailing Mr. Lamar Evers at 850-245-2606 or [lamar.evers@dep.state.fl.us](mailto:lamar.evers@dep.state.fl.us). Note that for areas where DEP does not have jurisdiction, DEP does not have to approve the methodology; however, an elevation transfer from the nearest tidal station could be used.

When there is not a tidal datum point the surveyor must conduct a 3 day evaluation of the tides to make a determination of the mean high water elevation. While we cannot provide an exemption from using a surveyor to determine the mean high water line, the applicant can request in writing that you measure their surface water setback from the more restrictive safe upland's boundary. The "safe upland's line" is an elevation determined by adding 0.5 feet to the nearest tidal datum point. This is an elevation and unless the applicant has a previous survey that provides an elevation reference point, they will need a surveyor to establish this elevation point on the property.

Sea walls or any other similar structure that constrains water do not exempt properties from the determination of the surface water boundary. There must be confirmation that the height of the sea wall or other similar structure meets or exceeds the surface water boundary elevation.

#### Mean Annual Flood Line Determinations

The following methodology is to be used for determining the MAFL:

Locate the PNSWB on a United States Geological Survey (USGS) topographic map. USGS topographic quad maps (7.5-minute series) must be consulted to determine the location of any

PNSWB which might impact the location of an OSTDS. The PNSWB symbol does not have to appear on the specific lot being reviewed (see Attachment I for guidance on Identification of Symbols that are included in the permanent nontidal surface water definitions). Only those water bodies mapped on the USGS quad maps as a perennial stream, a perennial river, an intermittent stream, a perennial lake, a submerged march or swamp, a submerged wooded marsh or swamp, a spring, or a seep are a PNSWB. An artificial surface water body is a PNSWB if they are designed to hold, or do hold water for at least 180 days per year and such artificial surface water bodies are not required to appear on the quad maps.

When the most recent 10 years of flood elevation data is available, the MAFL is established by calculating the arithmetic mean of the elevations of the highest yearly flood stage or discharge for the period of record. The calculation must include the most recent ten years but may include additional years if the data is available. When using 10 year data only, the elevation must be set by a surveyor and not department personnel.

If the most recent 10 years of data is not available, then the MAFL is determined based on the data available and field verification using the indicators listed in the statute. The intent is to identify the extent of those areas that are flooded on an annual basis. Where the indicators reflect a rare or aberrant event, they should not be used in determining the mean annual flood line. The indicators and elevation data used must indicate a continuous connection to the PNSWB. Indicators present but above the MAFL elevation cannot be used to establish the boundary of the PNSWB. The burden is on the applicant to provide flood elevation data. A surveyor's services may be required. The department shall accept an evaluation submitted by licensed Professional Surveyors and Mappers unless the department has a reasonable scientific basis for questioning the accuracy or completeness of the evaluation.

Information on the mean annual flood line indicators can be found in the Florida Wetlands Delineation Manual that is used by DEP. These indicators are to be used to identify the mean annual flood line in conjunction with available flood elevation data. The mere presence of wetland plant species does not establish that an area falls within the boundary of a PNSWB. Rather, the mean annual flood line is the area that floods on an annual basis. Copies of the Florida Wetlands Delineation Manual should be acquired by all health departments. If you cannot find copies, the manual can be downloaded from the Internet at: <http://www.dep.state.fl.us/water/wetlands/delineation/manual.htm>.

### Artificial Surface Water Bodies

The 180 day, visible standing water requirement for an artificial surface water body that does not have an impermeable bottom and side, to be considered a permanent nontidal surface water body, does not have to be a continuous 180 days. The department considers impermeable to be defined as a barrier material that has a maximum transmissivity of  $10^{-7}$  cm/sec. Retention areas, detention areas, swales or ditches are examples of possible artificial surface water bodies. Where these features fall within the boundary defined by the mean annual flood line of a PNSWB, they shall be considered part of the PNSWB. The law did not change the established 15 foot minimum setback from an OSTDS to the design high water line of retention areas, detention areas or swales designed to contain standing or flowing water for less than 72 hours after a rainfall. The 15 foot setback still applies to the design high water level of normally dry drainage ditches or normally dry individual storm water retention areas. If a structure contains visible water, but the structure has an impermeable side and bottom, setback from the structure that contains the water is not required.

For an artificial surface water body the design high water line established by the professional engineer may be used as the surface water boundary. Example: A newly constructed pond designed to hold water for 180 days or more is considered an "artificial surface water body" and permanent non-tidal surface water body. When indicators are not present, the "design high water line" of the pond is determined by the design engineer.

The statute also says that "a nontidal surface water body that is drained, either naturally or artificially, where the intent or result is that such drainage be temporary, shall be considered a permanent nontidal surface water body." The law requires application of the 75-foot setback from the identifiable boundary of a nontidal water body in situations where a temporary drawdown occurs based on natural or man-made conditions. For example, in Tallahassee, Lake Jackson disappears for a year or more every 25 years based on natural drainage conditions in the aquifer. The water always returns although there may be no standing water for a year or more. The law prevents an OSTDS from being placed in such an area created by a temporary condition.

The law recognizes circumstances where a water body symbol may appear on the quad map but the water body has been permanently drained and no longer exists. The 75-foot setback does not apply to such areas.

Note our regulations do not establish nor require a setback to "wetlands". If the existing lot elevation at the site of the proposed system installation and any unobstructed area is subject to frequent flooding, as defined in 64E-6.002(24) (a), FAC, the department cannot permit a system without additional fill material in the area of the system and contiguous unobstructed area to raise the lot elevation above the 2 year flood. However, the CHD cannot delay issuing a permit pending another agency's approval, but must notify the applicant when the permit is issued that other agencies may have jurisdiction over the placement of fill on the site (see Attachment II for a sample agency jurisdictional notification letter).

Please address any questions regarding this memo to your program consultant. Please distribute this memo to licensed septic tank contractors, private certified environmental health professionals and professional engineers working in your county.

Attachments

## ATTACHMENT I

### IDENTIFICATION OF SYMBOLS THAT ARE INCLUDED IN THE PERMANENT NONTIDAL SURFACE WATER BODY DEFINITION

In using the Topographic Map Symbols pamphlet, it is critical that you use **ONLY** the features that are identified in the law as those which are permanent nontidal surface water bodies.

These are:

1. a perennial stream,
2. a perennial river,
3. an intermittent stream,
4. a perennial lake,
5. a submerged marsh or swamp,
6. a submerged wooded marsh or swamp,
7. a spring or a seep.

All of these features must be as identified, using specific symbols, on the most recent quadrangle map, 7.5 minute series (topographic), produced by the United States Geological Survey (USGS).

In the body of the pamphlet, you will find sections titled “**RIVERS, LAKES, AND CANALS**”, and “**SUBMERGED AREAS AND BOGS**”. It is in these sections that you will find the map symbols that may be used to identify the appropriate features listed in numbers 1 through 7 above.

Example: A submerged marsh or swamp (5. above) has a darker blue grassy-type indicator on a light blue background. This IS a surface water body. Contrast this to a marsh or swamp, which has a white background and dark blue grassy type indicators, which IS NOT a surface water body.

It is important to note that when changes are made to the USGS quadrangle maps, they will normally be shown in a specific color. Normally, that color to be purple. If a permanent nontidal surface water body has a change, it is possible you will not see the correct color indicator, but will see purple instead. As an example, for an intermittent stream, you will look for a blue line or blue line with three dots included in the line. If a change from a previous edition of the quadrangle map has occurred, the intermittent stream may be shown in purple, and the blue line may not be evident.

Once you have identified a symbol that indicates a permanent nontidal surface water body, determination of its mean annual flood line must be based upon the annual flood elevation data and the indicators listed in the law.

**ATTACHMENT II**

**SAMPLE AGENCY JURISDICTIONAL NOTIFICATION LETTER**

Re: OSTDS Permit # \_\_\_\_\_

Dear Applicant:

The above referenced permit has been issued on property that may contain areas under the regulatory authority of the Florida Department of Environmental Protection, U.S. Corps of Engineers, or a local permitting agency, such as your county building department or local environmental program. The above referenced permit does not authorize you to either excavate or place fill in a jurisdictional area or violate any other state/local agency regulation. If applicable, you must obtain the necessary permit from the appropriate regulatory agency.

By copy of this letter, we are advising the appropriate regulatory agencies and the local building department that we have issued a construction permit for an onsite sewage treatment and disposal system on a site that may be under their regulatory authority.

If you have any questions on this matter please call our office at 999-999-9999.

Sincerely,

Environmental Health Director

Copy to:  
Florida Department of Environmental Protection (appropriate district)  
U.S. Corps of Engineers  
\_\_\_\_\_ Building Department