



Rick Scott
Governor

H. Frank Farmer, Jr., MD, PhD, FACP
State Surgeon General

9/29/11

INTEROFFICE MEMORANDUM

**INFORMATION
HSES 11-006**

DATE: September 30, 2011
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: 2011 Update to Surface Water Boundary Determinations

INFORMATION ONLY

This memo rescinds and replaces Information Memorandums HSES 10-005, 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 establish the boundary by referencing statutory 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 lot size and 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 lot size, authorized flow, and unobstructed area determinations. While current regulations require a 75 foot setback from the surface water body boundary, Rule 64E-6.015, Table V, provides repair system setback requirements. In addition, 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. Repair site plans need not be drawn to scale but must show the "in proximity" dimensions to the surface water body.

Tidally Influenced Surface Water Boundary Determination

The determination of the mean high water line (MHWL) for tidally influenced surface water bodies is governed by Chapter 177, Florida Statutes. The statute allows only 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 determined using specific elevations. All surveys of MHWLs must be filed with DEP. The surveyor is not required to provide evidence of filing to the CHD.

While we cannot provide an exemption from using a surveyor to determine the MHWL, as an alternative, the applicant can request in writing that the CHD utilize a more restrictive boundary than the MHWL. This more restrictive boundary would be the safe upland's line or a sea/canal wall. The applicant may complete the attached "Tidally Influenced Surface Water Boundary Determination" checklist (attached on p. 10), which includes detailed information on the use of these processes. Again, either determination requires elevations that must be set by a surveyor. Any survey that documents the height of a sea/canal wall may be used.

If in question, the CHD can verify the MHWL elevations provided by the applicant by comparing them to the elevations found in the LABINS Mean High Water Interactive Maps available on the LABINS website. 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.

Non-Tidally Influenced Surface Water Boundary Determination

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 a professional surveyor or mapper 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 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. Field verification of the MAFL means that the surveyor must clearly flag or mark the indicator with the highest elevation used as the basis for the MAFL determination.

For new and existing/modification applications, rule 64E-6.005(7) (a)-(c), requires the entire surface water area to be subtracted from the actual lot size to determine the net usable area and the resulting lot's authorized sewage flow. This requires determining the entire surface water area within the mean annual flood line on the property, rather than a simple setback.

While a licensed professional surveyor and mapper is the ideal choice for making MAFL determinations and calculations, property owners may choose to have the county health department (CHD) conduct the field verification of the MAFL. CHDs may use the following Alternate Surface Water Boundary (ASWB) Delineation Procedure when the applicant requests the CHD conduct the field verification to establish the MAFL. The CHD will establish the ASWB and draw the boundary line on the applicant's site plan. Please note the CHD's ASWB determination will not be the actual MAFL but a line landward of the actual MAFL to be used by the CHD to calculate net lot size and authorized sewage flows. An example of this procedure is provided in Attachment III.

MAFL Alternate Surface Water Boundary (ASWB) Delineation Procedure for CHDs

1. The applicant shall request the CHD determination in writing and may use the attached "Non-Tidally Influenced Surface Water Boundary Determination" form (attached on p. 10) to the CHD. A copy of the request shall be placed in the permit file. If the ASWB determination by the CHD is done in conjunction with a CHD site evaluation, no additional fees can be charged. If the applicant provides a third party site evaluation and requests the CHD conduct the MAFL field verification, a site evaluation fee shall be charged.
2. The applicant must properly mark property lines, as requested by the CHD.

3. Field verification of the MAFL means the CHD staff must clearly flag or mark the indicator with the highest elevation used as the basis for the ASWB determination. It is recommended that the CHD fully document their determination in the application record.
4. The location of the MAFL, determined by the indicator with the highest elevation, will be established by the CHD utilizing the criteria set forth in 381.0065(2) (i), F.S. Once this elevation has been set, the ASWB will then be located landward of this elevation. This will be done using basic shapes to generalize the shape of the surface water body into an area that can be simply calculated and drawn on the site plan by the CHD. The area shall be kept as close to the location of the actual MAFL as possible, but in no instance cross or go within the actual surface water boundary. The CHD must verify by spot checking elevations along the set ASWB to ensure it exceeds the elevation and remains landward of the MAFL.
5. When determining the lot's net usable area for authorized sewage flow allocation, the area that has been delineated will be subtracted from the total area of the lot. This number will then be used to calculate the authorized sewage flow. This somewhat enlarged surface water area will result in a lower authorized sewage flow and less net usable area.
6. Please note that system setbacks to the PNSWB shall be measured to the MAFL point that creates the shortest distance from the system to the surface water body. The ASWB cannot be used for setback purposes.
7. Based on the complete application submitted, along with the CHD delineated ASWB, placed on the site plan by the CHD, the CHD will determine if a permit can be issued. If all other statute and rule requirements are met and the delineated area meets the required setback and authorized sewage flow, then a permit may be issued. If the net usable area does not meet statutory requirements or the authorized sewage flow will be exceeded, then the CHD must inform the applicant of their option to obtain the services of a certified professional surveyor and mapper to provide a more accurate delineation of the surface water area. Final permit determination would be made once the certified professional surveyor and mapper has delineated the MAFL and the MAFL has been drawn onto the applicant's site plan. If the applicant declines to submit additional information, the permit would be denied based on the CHD's determination.

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. 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.

Wetlands / Frequently Flooded 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, surveyors 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 _____.

Sincerely,

Environmental Health Director

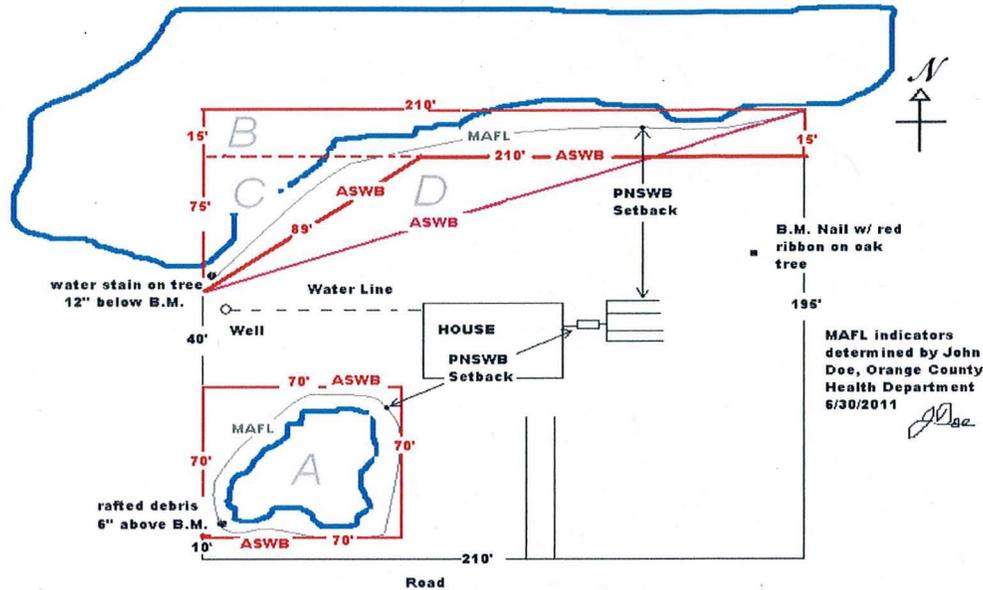
Copy to:

Florida Department of Environmental Protection (appropriate district)

U.S. Corps of Engineers

_____ Building Department

ATTACHMENT III



Current regulations require a 75 foot setback from the surface water body boundary. Rule 64E-6.015, Table V, provides repair system setback requirements. Lots platted prior to 1972 are subject to a minimum 50 foot setback.

	<u>ASWB</u>	<u>ASWB</u>
Total Area of The Lot	210' x 210' = 44100 sq ft	210' x 210' = 44100 sq ft
Area "A": Small pond in SW corner of lot	70' x 70' = 4900 sq ft	70' x 70' = 4900 sq ft
Area "B": Rear 15' of the northern boundary of the lot	210' x 15' = 3150 sq ft	
Area "C": Triangular area at the western boundary of the lot that begins at the water stain indicator and runs 75' north to within 15' of the northern property line and 89' northeast of the indicator.	$75^2 + b^2 = 89^2$ $5625 + b^2 = 7921$ $b^2 = 2296$ $b = 48$ $1/2(75')(48") = 1800 \text{ sq ft}$	
Area "D": Large triangular area which begins at the water stain indicator and extends north to the northwest property corner and northeast to the northeast corner of the property.		$1/2(210')(90') = 9450 \text{ sq ft}$ (delineated in pink)
Total ASWB Area	3150 sq ft 4900 sq ft + 1800 sq ft <hr/> 9850 sq ft	9450 sq ft + 4900 sq ft <hr/> 14350 sq ft
Net Usable Area	44100 sq ft - 9850 sq ft <hr/> 34250 sq ft .786 Acre	44100 sq ft - 14350 sq ft <hr/> 29750 sq ft .683 Acre
Authorized Sewage Flow	1500 gpd/Acre x .786 Acre <hr/> 1179 gpd	1500 gpd/Acre x .683 Acre <hr/> 1024 gpd

OSTDS Permit # _____

Tidally Influenced Surface Water Boundary Determination

I am requesting that the department use what may be a more restrictive boundary for determining setbacks on my property from a tidally influenced surface water. I understand that use of this more restrictive boundary may result in denial of my permit, and that I have the right to submit a Mean High Water Line (MHWL) determination from a professional surveyor or mapper. I have indicated my selection below:

<http://data.labins.org/2003/SurveyData/WaterBoundary/waterboundary.cfm>.

_____ A professional surveyor and mapper has established the safe uplands line on my property in place of the MHWL. I have submitted a copy of the survey indicating the safe uplands line as well as a copy of the details of the nearest LABINS tidal datum point utilized by the surveyor. The safe uplands line is an elevation determined by adding 0.5 feet to the nearest tidal datum point, which must be within a 1/2 mile radius of the established safe uplands line. I understand that a more restrictive surface water setback will be measured to the safe uplands line and that a more restrictive authorized sewage flow will be calculated using the limit of the safe uplands line as the surface water boundary.

_____ A professional surveyor and mapper has established the elevation of the top of the sea wall or canal wall on my property in place of the MHWL. When the elevation of the top of the sea or canal walls is lower than the tidal datum point, a MHWL must be determined by a surveyor. I have submitted a copy of the survey indicating this elevation. I understand that a more restrictive surface water setback to the onsite sewage system will be measured from the sea wall or canal wall and that a more restrictive authorized sewage flow will be calculated using the location of the sea wall or canal wall as the surface water boundary.

_____ I have submitted a copy of the details of the nearest LABINS tidal datum point that is within a 1/2 mile radius of the wall.

<http://data.labins.org/2003/SurveyData/WaterBoundary/waterboundary.cfm>.

_____ I am requesting the county health department obtain the nearest LABINS tidal datum point that is within a 1/2 mile radius of the wall.

Applicant or Property Owner Signature

Date

Non-Tidally Influenced Surface Water Boundary Determination

In place of a certified professional surveyor and mapper, you have requested the _____ County Health Department (CHD) to determine and draw on your site plan the location of the Mean Annual Flood Line for the Permanent Non-Tidal Surface Water Body (PNTSWB) located on your property. Please note that CHD staff are not surveyors and as such will be determining the net area of your surface water by an Alternate Surface Water Boundary (ASWB) determination, a line landward of the actual MAFL. While this provides a simpler and less costly alternative, it will not be as accurate as a determination by a surveyor.

Please note your property lines must be clearly marked for the CHD to accurately determine the specific location of the PNTSWB on the property, so it may later be drawn on the submitted site plan. The CHD will identify the location (elevation) of the field verification indicators for the MAFL utilizing the criteria set forth in 381.0065(2) (i), F.S.

After making this determination, the CHD will delineate on your site plan an estimated area from your property to be considered as the surface water area. This area will be larger than the actual surface water body that is on your property. It will be considered when calculating the authorized sewage flow for your property and will result in a slightly lower authorized sewage flow for the property.

Based on the complete application submitted, along with the CHD delineated ASWB; placed on the site plan by the CHD, the CHD will determine if a permit can be issued. If all statute and rule requirements are met, as well as surface water setbacks, and the delineated area meets the authorized sewage flow, then a permit may be issued. If the lot size or the authorized sewage flow cannot be met, then the CHD will inform you of your option to obtain the services of a certified professional surveyor and mapper. Final permit determination would be made once the certified professional surveyor and mapper has delineated the MAFL and the MAFL has been drawn onto the site plan.

I acknowledge the CHD has explained the process that will be used to determine the ASWB, and that I request the CHD to perform the determination of the ASWB in place of the actual mean annual flood line.

Applicant or Property Owner Signature

Date