

CORRELATION BETWEEN FUNCTIONS AND NONTIDAL WETLAND TYPES

(Adapted from October 20, 2014 version)

<u>Function (code)</u>	<u>Level of Function</u>	<u>Wetland Types</u>
Surface Water Detention (SWD)	High	LEBA (excluding LE5 and LE6 wetlands and wetlands with “K” water regime unless in a reservoir or dammed lake), LEFR (excluding LE5 and LE6 wetlands and wetlands with “K” water regime unless in a reservoir or dammed lake), LEFL (only in reservoir or dammed lake: LE2FL and LE3FL; not in impoundments), LEIL (not “A”, “D” or “K” water regime), LSBA, LRFPba, LSFR (not “A” water regime), LRFR (not “A” water regime), LRIL (not “A” water regime), PDTH, TEFRpDTH, TEBApdTH, TEBATH, TEBATI, PD2c1, PD2d1, PD2e1, PD3c1, PD3d1, PD3e1
		<p><i>Note:</i> The high level should not include any wetlands with “A” or “D” (seasonally saturated, formerly mapped as “B” in some places) water regimes with one exception for LEFL in reservoirs or dammed lakes. Does not include areas now classified as LK that were mapped as PUB_ following NWI mapping conventions. Also should not include any LE wetland associated with an artificial freshwater impoundment completely surrounded by estuarine wetland or water, or any vertical flow (isolated) impounded ponds and associated wetlands.</p> <p><i>Special Note:</i> In some regions “B” wetlands include continuously saturated wet meadows and swamps that may be subject to seasonal ponding; they are equivalent to wetlands mapped as “E” in the Northeast and should be rated as High for this function.</p>
	Moderate	LRFPfl, LRFR (other than above), LRPT, LSFL, LSPT, LE1FL, LEIL (other than above, excluding LE5 and LE6 wetlands), LSFR (other than above), TEBA (other than above; excluding vertical flow impounded), PD (other except PD2f , PD2d2, PD2r, PD3d2, PD3f,

PD3r, and vertical flow impounded ponds), TE__pd (other, excluding slope wetlands TESLpd__), TEFP__, TEFL__, Other TEFR (excluding vertical flow that are impounded)

Note: Peatlands along rivers and streams are designated as moderate for this function since they may store water in the acrotelm and in depressions during the summer before releasing water to the stream. In some regions of the country (e.g., Prairie Pothole Region), a great abundance of geographically isolated wetlands collectively are very important for temporary water storage but individually they are rated as moderate since they collect water from small areas. When this assessment procedure is applied to that region and similar situations, the predicted function of these wetlands should be re-evaluated by local specialists.

Caution: This function should not include any tidal wetlands, such as E2____, R1US, R1EM, and P__N, R, S, T and V, as their role in water storage is covered under the Coastal Storm Surge function.

Streamflow Maintenance (SM)

High "hw" wetlands (excluding impounded "h" types)

Moderate other "hw" wetlands (impounded "hw" types), LR1FPba (excluding "h" types), LS__BA (excluding "h" and not LS5), TEBAOUds

Note: While acreage of headwater wetlands may increase due to building ponds in headwater seeps (point features not polygons) and blocking drainageways, these wetlands ("h") do not increase streamflow, yet since they can contribute via overflow and seepage they are rated as moderate for this function.

Nutrient Transformation (NT)

High P__(AB, EM, SS, FO and mixes)C, P__(AB, EM, SS, FO and mixes)E, P__(AB, EM, SS, FO and mixes including __/UB and UB/__, etc.)F, P__(AB, EM, SS, FO and mixes)R, P__(AB, EM, SS,

FO and mixes)T, P__(AB, EM, SS, FO and mixes)N, P__(AB, EM, SS, FO and mixes)H, P__(AB, EM, SS, FO and mixes)Bt (fen) , L2_(AB, EM and mixes)C, L2_(AB, EM, and mixes)E, L2_(AB, EM, and mixes)F, L2_(AB, EM, and mixes)H, R_EM_C

GA coast – Include PFO3B, PSS3B and mixes of the two since they are continuously saturated; but not mixes with other types of “B” wetlands (FO1, FO4, EM, etc.).

MN (northern Midwest bog region) – Include “B” (continuously saturated) that are not “a” (bogs) since this water regime is equivalent to “E” used in the Northeast and includes wooded swamps and fens (P__t) that are important for this function. Again if “a” (acidic) exclude.

Note: In relevant regions, try to separate fens from bogs as the former are nutrient-rich sites while the latter are nutrient-poor sites: use circumneutral modifier “t” to identify fens EM1_t, SS__t, FO__t from bogs PSS__Ba, PFO__Ba (the “a” modifier), for example. Also exclude PFO5 and PSS5 from high; they are typically shallow ponds dominated by dead trees).

Moderate P__(AB, EM, SS, FO and mixes)D, P__(AB, EM, SS, FO)A, P__(AB, EM, SS, FO and mixes)K, L2EM_A, PUS/__(mixed with vegetation classes excluding FO5 and SS5), PUB/__(mixed with vegetation classes)H, L2EM_S, PFO5/other vegetated, PSS5/other vegetated; Other P-vegetated (AB, EM, SS, FO and mixes; excluding FO5 and SS5), R_EM_A

Note: Commercial cranberry bogs – PSSf – are not rated as significant for this function, nor are other farmed wetlands – Pf or wetlands associated with active dredged material disposal impoundments (“da”).

Carbon Sequestration (CAR)

High P__ (AB,EM, SS, FO, and mixes)E, P__ (AB,EM, SS, FO, and mixes)F, P__ (AB, EM, SS, FO, and mixes)H, P__ (AB, EM, SS, FO, and mixes)C, P__Ba (and mixes), P____g (=wetlands on organic soils), R_EM_C,

R_EME, R_EMF, L2EM_H, L2EM_F, L2EM_E, L2EM_C, L2AB_F, L2AB_H, P__B (continuous saturated types; bogs noted with “a”), L2AB_G, R_AB_F, R_AB_G, R_AB_H, PAB_G, PAB_H, PAB_K, PEM_K

GA coast – Include PFO3B, PSS3B and mixes of the two since they are permanently saturated; but not mixes with other types (FO1, FO4, EM, etc.).

Note: Bogs and other continuously saturated wetlands and wetlands with organic soils should be rated as high for this function. Exclude AB1, PFO5 and PSS5 from ‘High’.

Moderate P__ (AB, EM, SS, FO, and mixes)A, P__ (AB, EM, SS, FO, and mixes)D (seasonally saturated; continuously saturated “B” types should be rated as High), P__ (SS, FO, and mixes)K, R_EMA, L2EM_A, PUB (and mixes; and not PD2 b,c,d,e1, and f or PD3 b,c,d,e1, f and j1; also exclude vertical flow impounded ponds), PUS/vegetated, and L2US/vegetated, L2UB/vegetated, PFO5 (excluding vertical flow and impounded), PSS5 (excluding vertical flow and impounded)

Note: Mixes for vegetated wetlands are those where vegetation is the dominant class, while mixes for nonvegetated wetlands are those where the substrate is the dominant class. Commercial cranberry bogs – PSSf – and other farmed wetlands P__f are not included; also “mixes” should include nonvegetated wetlands where vegetated types predominate and vegetated wetlands where nonvegetated types predominate. If mapping includes any H or G wetlands that are vegetated by vascular plants other than aquatic bed species – not dead trees, they too should be rated as high for this function.

Sediment and Other

Particulate Retention (SR) High

LEBA, LEFR (vegetated and mixes, not “fm”- floating mat), LEIL (veg and mixes, not “fm”), LSBA, LRBA, LSFP, LRFP, LRFR (veg, not “fm”), LSFR (veg, not “fm”), LRIL (veg, not “fm”), PDTH, TE__pdTH (including __pq), PDBT, TE__pdBT, TEBATH, TEBATI, TEFRpDTH, PD2c1, PD2d1, PD2e1, PD3c1, PD3d1, PD3e1, PD2r, PD3r

Moderate LEFR (nonveg), LEFL (veg), LSFL (not P__D_), LRIL (nonveg), LRFR (nonveg), LSFR (nonveg), Other TEBA (not P__D_), PD1, PD2 and PD3 (not c, d, e, f, g, j types), PD4, TEFLpd (not P__D_), TEFp__ (not P__B_), TEFL__ (P__A, not P__D_), TE__pdOU, TE__pdIN, Other TEFRpd__

Note: No “D” (formerly “B”) wetlands should be identified as significant for this function; only flooded types: A, C, E, F, and H should be rated. This will exclude bogs (PT and “a”) but should include fens (possibly PT but lacking an “a”) and “B” wetlands on muck soils (e.g., Minnesota and northern Midwest region).

Bank and Shoreline
Stabilization (BSS)

High LR_(AB, EM, SS, FO and mixes; not LRIL and not “fm”), LS_(AB, EM, SS, FO and mixes and not “fm”), LE__(AB, EM, SS, FO and mixes; not LEIL and not “fm”), R_RS, L2RS

Moderate TE__pd (AB, EM, SS, FO and mixes), TE__OUhw (AB, EM, SS, FO and mixes), TE__OIhw (AB, EM, SS, FO and mixes)

Note: Exclude IL wetlands from this function since they are not shoreline features. Be sure to also exclude US and UB wetlands in nontidal areas.

Fish and Aquatic
Invertebrate Habitat (FAIH)

High L2_F, L2_H or G, L2AB, L2UB/__(AB, EM, SS, FO), LE__ (vegetated; AB, EM, SS, FO) and NWI water regime = H (permanently flooded), P__F and adjacent to PD (PD1, PD2 a3,b,and h, PD3b and h, and PD4 only), LK, RV (all except LR4), or ST (all except LS4) waters; P__F and __FRsl or __BAsl (slough), PAB (not excavated or impounded), PUB/__(AB, EM, SS, FO), P__(EM, SS, FO)H, PD (PD1, PD2 a3,b,and h, PD3b and 3h, and PD4 only) associated with P__(AB, EM, SS, FO)F, R2AB, R2EM, PD (PD1, PD2a3, 2b, 2h, PD3b, and 3h, and PD4) associated with P__(AB, EM, SS, FO)H

Note: L2__K wetlands were not rated due to unknown management.

Moderate LE__ and PEM1E (contiguous with waterbody; no mixes), LR__ and PEM1E (contiguous with waterbody; no mixes), LS__ and PEM1E contiguous with waterbody; no mixes), PEM5F and adjacent to LK, RV (except LR4), or ST(except LS4) waters, PD (\geq 1 acre in size and PD1, PD2 a, b, h, PD3 a3, b, h, PD2e2, PD2e3, PD2a4, PD2a5, PD2p, PD2p1, PD2p2, PD2q, PD2q 1, PD2q2, PD3a4, PD3a5, PD3e2, PD3e3, PD3p, PD3p1, PD3p2, or PD4), TEFRpd (along these ponds), PAB (impounded or excavated and \geq 1 acre and not associated with PD2 c,d,e,f,and g or PD3 c,d,e,f, and g), LR_FPba

Note: Ponds one acre or greater and certain types were selected as moderate. Including PEM1E under Moderate is an attempt to include some marshes that may be classified as “E” wetlands rather than “F”. Exclude wetlands and ponds associated with active dredged material disposal impoundments (“da”).

Stream Shading (Shade) LS (not LS4 or not LS__pd) and PFO, LS (not LS4 or not LS__pd) and PSS (not PSS_Ba or not PSSf); excluding FO5 and SS5; TE_OUhw and PFO or PSS (not PSS_Ba or PSSf)

Locally Significant Example: Lake Champlain - seasonally flooded LE__ wetlands (important for spring spawning); possibly add LR__ and LS__ wetlands with an E or C (water regime for spawning)

Note: Shrub bogs should be excluded from all the above, e.g., PSS3Ba and commercial bogs = PSSf.

Waterfowl and Waterbird Habitat (WBIRD)

High L2_F (vegetated, AB, EM, SS, FO and mixes with nonvegetated), L2AB (and mixes with nonvegetated), L2US_(F,E, or C), L2UB_F, L2_H (vegetated, AB, EM, SS, FO and mixes with nonvegetated),

P__F and adjacent to PD (PD1, PD2a3, 2h, PD3h, and PD4 only), LK, RV(not LR4) or ST (not LS4) waters or along a slough (“sl” modifier); PAB (not excavated or impounded, except those associated with wildlife impoundment – “wi”), P__H (vegetated, EM, SS, FO including mixes with UB), PEM1Eh and adjacent to LK, RV(RV1 RV2, RV6b, and RV6c only), ST (ST1 and ST2 only), and certain PD (PD1, PD2a3, 2h, PD3h, and PD4 only), PEM1Eb; PUS_F (not PD3), PUS_E (not PD3), LS__ and PEM1E (including mixes; not LS4), LR__ and PEM1E (including mixes; not LR4), TE__ hw and PEM1E (including mixes); LE__ and PEM1E (including mixes); PD2h, PD3h, PD4, PD1 associated with P__(AB, EM, SS, FO)F, PD associated with P__T, PD1 associated with P__(AB, EM, SS, FO)H, PUB__b, R_EMF, TE_pd and PEM1E (including mixes)

Moderate

PEM5__E or F and adjacent to PD, LK, RV(not LR4), or ST(not LS4), other L2UB (not listed as high), Other PD (\geq 1 acre in size and PD1, PD2 a, h, PD3 a, h, or PD4), Other P__F (vegetated wetlands and >1 acre), PAB (impounded or excavated and >1 acre), LS4 and PEM1E (> 1 acre in size), TEBA and PEM1E (> 1 acre in size), other PEM1Eh

Wood Duck

LS(1 or 2)BA and P__ (FO or SS and mixes; not PSS3Ba or PSSf – commercial cranberry bog), LS(1 or 2)FR and P__ (FO or SS and mixes; not PSS3Ba or PSSf), LR(1 or 2)FPba and P__(FO or SS and mixes; not PSS3Ba or PSSf), LRFpba and PUB/FO; LEBA and P__(FO or SS and mixes; not PSS3Ba or PSSf) and contiguous with open water, TEBAOUhw and P__(FO or SS and mixes; not PSS3Ba or PSSf)

Note: All waterfowl impoundments and associated wetlands that should be marked with “wi” should be rated as high for this function. Ponds used for aquaculture (2b, 3b) are excluded since management will likely deter use of these ponds; associated wetlands should also be

excluded as should wastewater treatment, industrial, and commercial ponds and lakes and associated wetlands. Shrub bogs, e.g., PSS3Ba, commercial bogs = PSSf, and farmed wetlands: P__f should be excluded in Northeast, but check use of farmed wetlands in Prairie Pothole and elsewhere. Also exclude wetlands and ponds associated with active dredged material disposal impoundments. For wood duck, there should be no wetlands along intermittent streams designated as important.

Comment: PEM1C wetlands along waterbodies may also be important for this function in some regions, but in the Northeast these may be wet meadows rather than marshes; these wetlands are recognized as important for “Other Wildlife.”

Other Wildlife Habitat
(OWH)

High Any vegetated wetland complex \geq 20 acres, wetlands 10-20 acres with 2 or more vegetated classes (excluding EM5), certain ponds (PD1a, b, c, d, e, f, h, i, j, k, l, m, n, o, p, q1, q2, q3, q4) , freshwater wetlands (P___ or L2___ and not EM5 - *Phragmites*) on undeveloped portions of barrier islands or beaches, small permanently flooded or semipermanently flooded wetlands (including PUBH and PUBF) within a forested wetland or upland forest (can use specific PD types to identify these), other forested or scrub-shrub wetlands within 100m of these permanently flooded or semipermanently flooded wetlands

Moderate Other vegetated wetlands

Note: Vegetated wetlands should focus on EM, SS, and FO; exclude AB from the size determination of a vegetated wetland complex, but include AB mixes with EM, SS, and FO (e.g., AB/FO, EM/AB) except FO5 and SS5. Mixes of subclass (e.g., FO1/4 or SS3/1 do not qualify as a mixed class; a mixed class wetland is comprised of two different classes (e.g., FO/SS, EM/SS). This function requires merging of polygons so that complexes are identified for the acreage determination, then recompile and look within the complex for more than one class or mixed class wetlands for the rating. Exclude wetlands and ponds associated with dredged material disposal impoundments (“da”).

Unique, Uncommon, or
Highly Diverse Wetland

Plant Communities (UWPC) *Typically apply this function only where region has designated special types for this function or where this has been done locally.*

Regional significant

(Northeast U.S.)

E2EM1N, E2EM1P6, R1EM, R1US (only where vegetated in summer), PEM1N, PEM1R, PEM2N, PEM2R, PSS_R, PSS_T, PFO4__g and PSS4__g (Atlantic white cedar; including mixtures), P__t (fens – EM, SS, FO), PFO2__ and PSS2__(bald cypress; DE and MD), E2AB__ (eelgrass and SAV beds-not algae), LS__FR (excluding PFO5 and SS5), LR__FR excluding PFO5), *PD1m (woodland vernal pool), *forested wetlands within >7000-acre forest (limit to Mid-Atlantic Region and Coastal Plain only), karst ponds and associated wetlands, E2EM1N6, PEM1T

Certain coastal wetlands along the Great Lakes (e.g., Presque Isle, PA; will need to be designated on a case-by-case basis)

Note: Exclude any altered wetland – x, h, td, and tr – plus any “d” wetland that is channelized or extensively ditched; also exclude any EM5 wetland or wetland mixed with EM5 unless it is native *Phragmites*. R1US wetlands only where mapped on leaf-off imagery and no summer image was available; otherwise should be mapped as R1EM2 where vegetated in summer with emergents.

Locally significant

(case-by-case;

Northeast U.S.)

PFO2__ (larch), PSS2__(larch), PSS3Ba or PSS1Ba (and mixes; shrub bog), northern white cedar swamps, hemlock swamps, E2EM1N and P (some areas), LEFR with EM/AB and AB/EM vegetation, other uncommon types in an individual watershed

**Comment:* Can't easily do, would need to hand pick or do additional GIS analysis.

POSSIBILITIES FOR SOUTHEAST:

Regionally significant

(Southeast U.S.) Mountain bogs (NWI code?), Rare plant habitats, freshwater tidal wetlands (R1EM, PEM_N, PEM_R, PSS_R; PEM_T, PSS_T, not Forested), oligohaline estuarine marshes (E2EM_N6 or E2EM_P6), E2FO2__6 (any mapped?), woodland ponds (only on Coastal Plain = Coastal Plain ponds), pocosins (relatively undisturbed), Carolina bays (relatively intact only), pitcher-plant bogs (NWI code?), karst ponds and associated wetlands

Locally significant

(case-by-case)

(Southeast U.S.) Cypress swamps (PFO2_ and PSS2_ and mixes with FO2 and SS2), LE_FR with EM/AB or AB/EM?, other uncommon types in a specific watershed, Atlantic white cedar swamps (PFO4_g), P-vegetated_H

POSSIBILITIES FOR MIDWEST:

Regionally significant

(Midwest U.S.)

Same as for Northeast (except tidal)?, Great Lakes coastal wetlands (not ditched, diked, or excavated), interdunal wetlands, marshes and wet meadows surrounded by natural habitat*, plus others to be defined at MN meeting

**Comment:* Can't easily do, would need to hand pick or do additional GIS analysis.

Note: Exclude any altered wetland – x, h, td, and tr – plus any “d” wetland that is channelized or extensively ditched.