Corresponding functions of SW in GSW

Here we present a table that shows some function names in the GSW Oceanographic Toolbox of TEOS-10 and the corresponding function names in the SeaWater Matlab Library of EOS-80, http://www.cmar.csiro.au/datacentre/ext_docs/seawater.htm.

Variable	SeaWater & ESO-80	Gibbs-SeaWater (GSW) & TEOS-10
Absolute Salinity	–	gsw_SA_from_SP(SP,p,long,lat)
Conservative Temperature	–	gsw_CT_from_t(SA,t,p)
density (i.e. in situ density)	sw_dens(SP,t,p)	gsw_rho(SA,CT,p)
potential density	sw_pden(SP,t,p,pr)	gsw_rho(SA,CT,pr)
potential temperature	sw_ptmp(SP,t,p,pr)	gsw_pt_from_t(SA,t,p,pr)
in situ temperature from pt	sw_temp(SP,pt,p,pr)	gsw_pt_from_t(SA,pt,pr,p)
σ_0 , using θ_0 = sw_ptmp(SP,t,p,0)	sw_dens(SP, θ_0 ,0) − 1000 kg m^{-3}	gsw_sigma0(SA,CT)
σ_2 , using θ_2 = sw_ptmp(SP,t,p,2000)	sw_dens(SP, θ_2 ,2000) − 1000 kg m^{-3}	gsw_sigma2(SA,CT)
σ_4 , using θ_4 = sw_ptmp(SP,t,p,4000)	sw_dens(SP, θ_4 ,4000) − 1000 kg m^{-3}	gsw_sigma4(SA,CT)
specific volume anomaly	sw_svan(SP,t,p)	gsw_specvol_anom_standard(SA,CT,p)
dynamic height anomaly	− sw_gpan(SP,t,p)	gsw_geo_strf_dyn_height(SA,CT,p,p_ref)
geostrophic velocity	sw_gvel(ga,lat,long)	gsw_geostrophic_velocity(geo_str,long,lat,p)
N^2	sw_bfrq(SP, t, p, lat)	gsw_Nsquared(SA,CT,p,lat)
pressure from height (SW uses depth, not height)	sw_pres(− z,lat)	gsw_p_from_z(z,lat)
height from pressure (SW outputs depth, not height)	z = − sw_dpth(p,lat)	gsw_z_from_p(p,lat)
sound speed	sw_svel(SP,t,p)	gsw_sound_speed_CT_exact(SA,CT,p), or gsw_sound_speed(SA,CT,p), or gsw_sound_speed_t_exact(SA,t,p)
isobaric heat capacity	sw_cp(SP,t,p)	gsw_cp_t_exact(SA,t,p)
adiabatic lapse rate*	sw_adtg(SP,t,p)	gsw_adiabatic_lapse_rate_from_CT(SA,CT,p), or gsw_adiabatic_lapse_rate_from_t(SA,t,p)
SP from conductivity ratio, (PSS-78)	sw_salt(R,t,p)	gsw_SP_from_R(R,t,p)
conductivity ratio from SP, (PSS-78)	sw_cndr(SP,t,p)	gsw_R_from_SP(SP,t,p)
distance	sw_dist(lat,long,units)	gsw_distance(long,lat,p)
gravitational acceleration	sw_g(lat,z)	gsw_grav(lat,p)
Coriolis parameter	sw_f(lat)	gsw_f(lat)
testing of all functions	sw_test	gsw_check_functions
contents	Contents	gsw_contents

* The SW and GSW functions output the adiabatic lapse rate in different units, being K (dbar)$^{-1}$ and K Pa^{-1} respectively.