Documentation of Changes made for each Version of the Nearshore Calculator

Updated for Nearshore Calculator Version 1.5 February, 2023

In this document, we list the changes that we made to the calculator since we released version 2020 V1.0 in November of 2020.

12-23-2020. Version 1.1: We made no changes to any formula. We clarified in the "ShorelStab" tab that all entries for time need to be larger than 0. See note in Note column cell E25. Default entry value for C25 is 10 years.

1-21-2021. Version 1.2: Thank you users for bringing a cell reference typo in the Overwater Structures tab to our attention. While the conservation calculator we used for the 39 batch consultation was correct, we introduced a cell reference mistake while improving the layout for the first posted version. Overwater Structures Tab: We corrected errors in 12 cells now again linking correctly to the buffer areas shown in column F (not I as version 1.1 shows). Affected cells: F61-63, F70-72, F108-110, F117-119

Overwater Structures Tab: We clarified language in column B in the merged cells for grated floats.

MDredging Tab: Clarified language: row3 needs to read USZ

2-19-2021. Language Change - Cells CDE 167 changed text from Cell E99 to "To be entered in Cell E100 and or E101" and Fixed Equation in cell F27 from = (E25 to =(E27 Correcting reference from USZ to DSZ

3-2-2021. Updated block title language to include repairs in the OWS, boat ramp jetty, and shoreline stabilization tabs.

Credit Factors: changed pocket estuary credit factor title to "pocket estuary/embayment." Reference information added about Pocket beach/embayment added in reference tab. Added hyperlinks in each project input tab to the pocket estuary explanation in the Ref tab.

3-3-2021. Version 1.3: Riparian Zone Tab: Adjusted all language to say "130ft" for riparian zone (from 50ft) in cells B/C14, B/C15, B/C19, B/C27, and E/F/G 37.

Riparian Zone Tab: Updated 2 equation cells to calculate a 130 ft riparian, rather than 50 ft. F19 and H19.

Riparian Zone Tab: Removed height (+/- 13ft) of trees and shrubs in cells B/C 14, and B/C 15

Updated Next/In Progress list from Changes&ToDo Log tab into separate document.

3-10-2021 Beach N. Tab : Clarified language in Cell A4 – Changed entry unit from cubic feet to cubic yards; and added table reference for erosion potential.

Shorel Stab Tab: Clarified language in Cell A2 - hybrid/soft armoring and pocket beaches are not entered into this tab. Credits are given for existing bulkhead removal.

May 2022 Version 1.4:
Correction of Errors: Formula to determine debits for pile replacements in cell F 51/52 was connected to SAV scenario in New entry block rather than Replacement entry block. Changed formula from =((POWER(((E52/2)/12),2)*PI())*E51*LOOKUP(**E5**,'OWS Lookup Tables'!M62:M66,'OWS Lookup Tables'!F62:F66))*(1+E82) to
=((POWER(((E52/2)/12),2)*PI())*E51*LOOKUP(**E41**,'OWS Lookup Tables'!M62:M66,'OWS Lookup Tables'!F62:F66))*(1+E82)
We fixed the same SAV reference mistake for the formula in F71

We corrected typos on the Overwater Structures tab.

We added **two new tabs**: *InputShorel* tab and *SAV Planting* tab. The *InputShorel* tab helps simplify inputs for the *ShorelStab* tab.

We updated the language in *ShorelStab* tab: We simplified determining horizontal distance between HAT and MHHW via use *InputShorel* tab and we clarified when before and after vegetation scenario should be referenced.

User Interface Revisions:

We moved entry of Site Specific Credit Factors and SAV to the Project D tab (and hid all Credit factor rows in project specific entry tabs.)

Summary tab: The final calculator output goes to 0 instead of showing positive habitat benefits (like the RGP 6 Calculator). We aim to clarify that any positive balances cannot be carried over to other projects (based on regulatory constraints), but will further help with recovery in Puget Sound.

Summary tab: Related to above, we added a question Y/N - is the project entirely a standalone restoration action?

Change&ToDo Log tab: This tab (hidden by default) has been removed from the Calculator. Please refer to this document, Change Log for the Conservation Calculator, for a summary of changes made to the Calculator.

Added a link to the PS Nearshore Page in row 14 of the Summary Tab.

Added a link to NOAA's Beach Slope Reference Line GIS layer in the ProjectD and InputShorel tabs.

Formatted cells F46 of the Overwater Structures tab, and cells C16, C17, C32 in the ShorelStab tab to show 2 decimal places.

Updated the figure for the Nearshore Zones in the Ref. tab to match the figure in the most current User Guide.

February 2023 Version 1.5:
Corrected minor mistake in RZ HEA cell B 22, a fixed value was copied over the formula; we re-entered =B15+B19-1

RZ tab – Added conditional formatting and clarification language so users know to only enter *changes* in riparian cover types.

RZ tab – Reduced default habitat benefit duration to 10 years without site protection. Longer benefit durations can still be entered and calculated larger service values apply if a deed restriction is proposed.

ShorlStab tab – clarified language for how to input riparian coverage.

BoatR Jetty tab - Unlocked area cells – consistent with *Overwater Structures* tab.

BoatR Jetty tab and *Overwater Structures* –Areas for some structures require length and width entry. For those structures, the areas are calculated from the length and width entries. In some cases, like for complex floats, the calculated areas may have to be adjusted and the formula in that cell overwritten. We used Visual Basic for Applications (VBA) so area formulas are not deleted permanently when entering a "complex float" or structure with an area that differs from its length times width. The formula will be copied back into the area cell when an entry is deleted.

Dredge tab – has now two area entry blocks in case areas have different site-specific adjustment factors or LSZ SAV scenarios.