**How to update:**

**a) the Groundwater History sections of the Groundwater Levels site pages of the TDC website, and**

**b) the Groundwater Summary table in Hydrotel**

[Groundwater levels | Tasman District Council](https://www.tasman.govt.nz/my-region/environment/environmental-data/groundwater-levels/)

**Part One: Get Data Out of Hilltop**

1. In Hilltop Manager, open Hydrology-Archive.dsn.
2. Open Hilltop Hydro (the "H" button third from right on the icon bar).
3. Project --> Open --> M:\Staff Folders\Mimi\Groundwater Website Updates\GroundwaterSiteCollection
4. Project --> Edit --> GroundwaterLevel\_WebsiteUpdate --> Edit

This is the list of sites in (roughly) reverse order of how it appears on the website, plus extras at the end that are in the Hydrotel summary but not on the website.

1. Table -> Min Mean Max (P3):
   1. Data selection = Collection (pick GroundwaterLevel\_WebsiteUpdate)
   2. All Data – might have to manually update the end date
   3. Options --> Statistics --> Monthly Stats
   4. Click "Send to Clipboard"

This will produce a series of data tables with values for Year, Month, Minimum, Mean, and Maximum, as well as other columns of data we don’t care about. There will be one table for each site.

(Note: Do not use “Min Mean Max (P3) --> Options --> Statistics --> Monthly Min, Mean, Max.” Although this option will produce data tables with only the data we want, it only includes data from whole months. This is a problem if there are partial months at the beginning or end of the record, or if there are data gaps in the middle, and the record min or max is in a partial month, because they will not be included.)

1. Open Notepad or other text editor.
   1. If it’s still in the Clipboard, paste.
   2. If not, Select All (Ctrl-A) in the Hydro output window, then Ctrl-C to copy, then Ctrl-V to paste into the text editor.
2. Save the Notepad file.

Suggestions: the filename should probably include the date (either today’s date or the date range of the data), the words “Groundwater Level” and/or “Website Update” or other relevant description. Ideally it will not include spaces (so, “GroundwaterLevel.”)

**Part Two: Perl**

1. Obtain a copy of the Perl script M:\Staff Folders\Mimi\Groundwater Website Updates \GW\_WebUpdate\_MakeHtmlTables.pl.
2. Put it in the same folder as the data file.
3. Start Perl.
   1. If Perl isn’t already installed, you’ll need to convince the Service Desk to install it for you. For MS-Windows, Strawberry Perl should work fine.
4. In the Perl console, navigate to the folder where you put the perl script and data file.
5. Type “perl GW\_WebUpdate\_MakeHtmlTables.pl”
6. Type in (or copy/paste) the filename of the data file when it asks. Do not put in any leading or trailing spaces.

If the script is still working right, it will produce two types of files:

1. an html file for each site, with filenames in the form YYYYMMDD\_GroundwaterLevel\_[sitename].html. YYYYMMDD is today’s date. The sitenames are whatever Hilltop Hydro said it was in the header of each data table.
   1. If you double-click to open these files, it’ll open in a web browser window and show you what the numbers are, formatted in the same order as it looks on the official website.
2. a table with minimum/maximum/averages that resembles the groundwater summary report in Hydrotel. This file will be named YYYYMMDD\_GroundwaterLevel\_Hydrotel.csv (where YYYYMMDD is today’s date).
   1. This can be opened with MS-Excel, to show the values in the same order as the Groundwater Summary report in Hydrotel.

Perl may report errors if a particular site doesn’t have a full year of data (such as Quayle Street as of Jun 2023). These can be ignored.

**Part Three: Update the Website**

The site names on the website are not an exact match to the site names from Hilltop, but most are similar. If you’re not sure, it tells you the Hilltop name in the caption under the auto-generated level graphs in the top half of the web page.

* + “Arthur Marble Aquifer at Te Waikoropupu Springs” on the website is “GW 6013 Pupu Main Spring” in Hilltop.
  + There is both a Redwood Rd and a Redwood Lane. They are separate sites.

1. Open the web editing interface via <https://tasman.govt.nz/admin> (logins are provided by Ali Hamblin in the Communications Team). Navigate through the site tree to the appropriate section. The organisation is the same as the actual website.
   1. My Region --> Environment --> Environment Data --> Groundwater Levels --> all the site pages are listed here.
2. For each site:
   1. Use Notepad or another text editor to open the html file produced by Perl.
   2. At the top of the html file, it says “Period of Analysis” with month and year for the start and end of the date range. Update the website with the new dates as necessary.
   3. Under Main Content in the website editor, on the icon bar, there is an icon that looks like <> and the hovertip says “source code.” Click this to pop open a window with the html code for the Groundwater History section.
   4. In both the website popup and the html file, look for the tags “<table>” and “</table>.” (The first one might say “<table width=”831”> or somesuch.)
   5. Replace all of the code between these tags in the website popup, with all of the code between these same tags from the html file.
   6. Click OK to close the popup window.
   7. Click Save in the web editing interface.
3. General suggestion if you’re updating all 50ish sites at once: instead of clicking Apply For Approval for each site, send an email to Ali Hamblin that you’ve made a bunch of changes to the Groundwater Levels part of the website, and she will put them all through for you without sending 50ish email notifications to a large number of other TDC staff members.

**Part Four: Updating Hydrotel**

1. Open Hydrotel. Your password is probably “pass.”
2. In the left sidebar, click the Navigator tab.
3. For each site:
   1. Double click to open the html file produced by Perl in a web browser. At the bottom, under the monthly table, are the updated numbers for overall minimum, average, and maximum.
   2. In Hydrotel: All Groundwater --> site name --> Stage --> Stage (with an H icon) --> Right click --> Edit Point
   3. Halfway down the window that opens, one of the tabs is Reference. Click to go there.
   4. At the bottom of the window, there is a row of buttons that say: + - ^ [checkmark] x [right arrow]. Click the ^.
   5. Edit in the updated numbers.
   6. Click the checkmark to save.
4. In the left sidebar, click the Reports tab.
5. If the Groundwater Summary report isn’t visible in the left panel, right-click the top of the folder tree and select Add Report to Tree. Select Groundwater Summary from the list on the left, then Add Selected at the bottom.
6. Double-click on the report in the tree panel to bring up a nicely formatted table. This can be printed out if it makes things easier.
7. Compare the updated numbers in the Groundwater Summary report from Hydrotel to the numbers in YYYYMMDD\_GroundwaterLevel\_Hydrotel.csv (which has the same numbers as the individual html files). Check that everything was updated correctly.