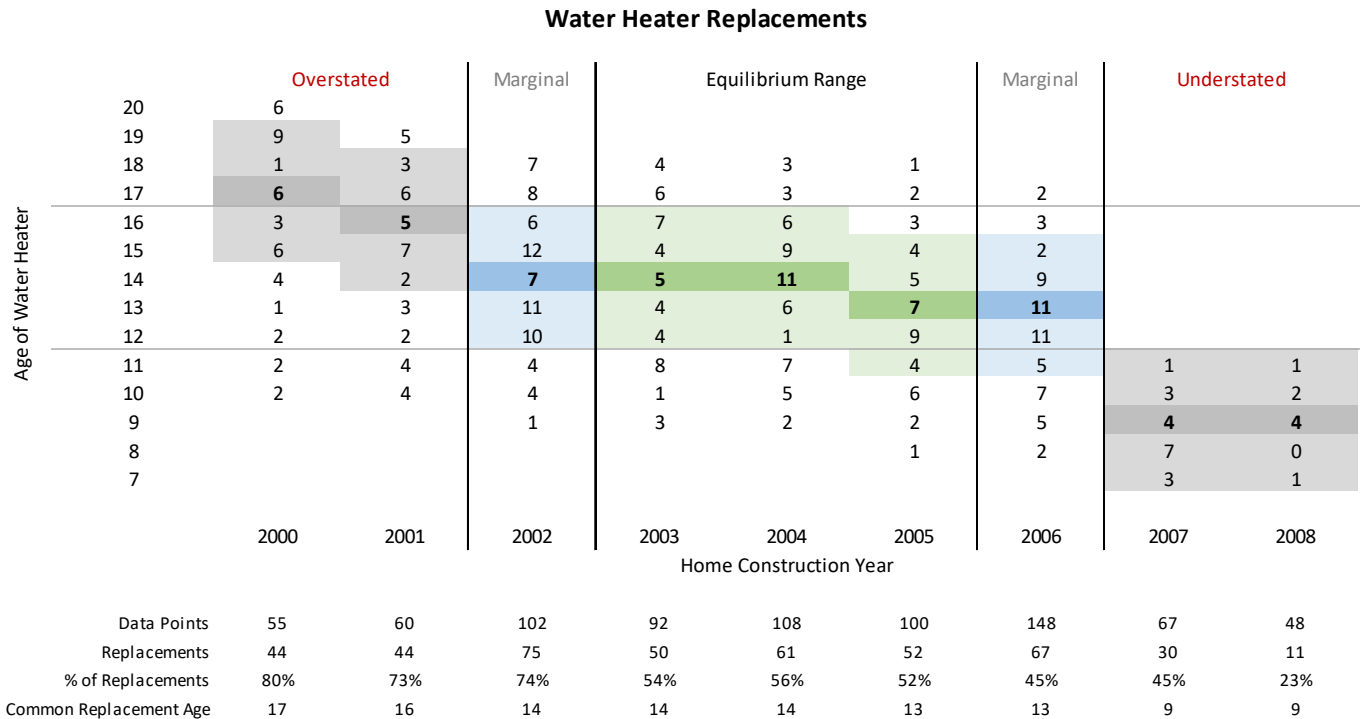


How long do water heaters really last?

MRT Home Inspections Article November 2023 – by Tyler Cole

I have noticed some comments from clients and realtors that water heaters only last about 10 years and that figure seemed odd to me given the fact that many inspected homes have water heaters older than that figure. I did some research on the internet and found numerous websites stating the life expectancy of the common tank style water heater as 8 to 12 years. I realized that I likely have the answer contained in the archive of my home inspection reports.

To investigate the internet claim, I crafted a spreadsheet of two key figures; the year the home was built and the year of the water heater at the time of the inspection. Over the course of six years of inspections (2017 to 2023), I was able to identify 434 water heater replacements that had an overall average age of about 14 years. However, a certain level of care needs to be applied to evaluating this data. The important factor I learned was to emphasize the replacement age when it exists in an equilibrium range (ie. 50% of the homes have had their water heaters replaced). This condition occurs when there is good replacement data early and late in the life span of a water heater. As depicted in the graph, a home constructed in 2000 does not have good equilibrium data because I had not inspected homes far enough into the past to see what the early and mid-range replacement data was like, as such the lifespan of a water heater is overstated. Likewise, homes constructed in 2007 and beyond understate the lifespan, due to an abundance of early water heater replacement data and the need for more future inspections to reach equilibrium. The result of evaluating the data is that the lifespan range of a tank style water heater should be stated as 12 to 16 years.



So why does the internet give the impression that they only last 8 to 12 years, a figure that is a bit off from the actual 12 to 16 years? There could be local factors in Albuquerque and Rio Rancho, such as our high altitude or quality of city water that has some type of effect not observed elsewhere in the country, but there are no studies I could find. Another possibility is that the newer water heaters have been designed to fail sooner and this condition is just not reflected in my inspection data yet, but that would just be speculation because failures have not happened yet. With these unlikely possibilities, I did notice that the sites stipulating the age range are mostly plumbing contractors and perhaps their aim is to convince homeowners to replace their water heater sooner rather than later? Regardless of the case, the real facts point to water heaters lasting a bit longer than the internet sources suggest. My goal is not to simply disprove the internet claim, but rather to know what the real numbers are so I can present a proper life expectancy range to my clients. Moving forward, I intend to continue tracking replacements and periodically update my findings if there are any trends in newer water heaters to shift away from the current 12 to 16 year range.

Factors Considered in Evaluating the Data

- **Equipment Upgrade** - The overall data had some very early water heater replacements which could be the homeowner switching out a good water heater with a larger capacity or tankless unit. There is no way to know for sure, so they are counted as a replacement.
- **Tankless or Electric Units** – Tankless units and electric units are touted as being able to last longer than a regular unit, but they were very uncommon in the homes inspected, and as such have little to no affect on the data conclusions.
- **Remodels** – About 5% of the homes inspected are recent remodels “flips” and it is somewhat common for the contractor to just replace an older water heater, regardless of function, to advertise an “all new” condition. Again, there is no way to know this for sure, so the new water heater is assumed to be replacing a failed one.
- **Area Limitation** – I have only included the primary inspection areas of Albuquerque and Rio Rancho to maintain a unified area. While I do have a fair amount of data for the east mountains, Los Lunas, Placitas, etc. there could be factors in these areas, such as well systems and water quality that might skew the data.
- **Data Adjustments** – In collecting the data there will often be a 1-year difference between the reported age of the home and the water heater. These are not included as replacements because they are most likely just stating the year of construction wrong. Also, this is supported by the furnace being a similar increment off.