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s a freshwater ecologist and passionate environmentalist you would think I'd have a natural affinity for a government department named the Ministry for the Environment.

Over the last few decades the Ministry for the Environment (MfE) has been captured by politics; concentrating on making the policies of the government of the day look good. This phenomenon is happening at central and local government and is known as 'agency capture'.

Exemplifying how it manifests in the environmental arena, there is now a standard formulation initiated by Ministry for the Environment and used by most regional councils for making freshwater states and trends look better than what they really are.

Usually, the first trick is to make it look like there is considerably more water available than anyone could ever need or possibly pollute. This is done by presenting the total annual rainfall, and then revealing the comparatively small amount of that taken for irrigation and industry. The implication being that all the water not used is 'wasted'.

In reality there is no such thing as 'wasted water'. The natural full flows are what shape our river valleys, the morphology of the rivers and streams, and everything about them, including the life in them. The rivers and lakes have evolved together with their biology over millenniums with full natural flows. Every drop taken has an effect and the other unmentioned impact is that the water that is taken makes its way back into waterways in a much poorer state.

The next 'trick' involves shifting the goalposts and claiming after applying less strict limits that there is no problem. You simply set the limits for pollutants to match the most degraded waterways, and then you can write state-of-the-environment reports showing how most of the sites have acceptable levels of pollution.

A great example of this goalpost shifting, ironically under the banner 'a fresh start for freshwater', is MfE's radical weakening of the limits for nitrogen in water (which in many parts of this country is the most significant freshwater pollutant).

The long-accepted and scientifically robust Australasian (Anzecc, 2000) standard to protect freshwater ecosystems from algal blooms is less than half a milligram – 0.44 mg/l – of nitrate-nitrogen per litre of water.

Under the new MfE regime, the allowable level has been set at 6.9 mg/l, or 15 times the Anzecc guidelines. The associated 'water quality bands' for nitrate are farcical. Sites with nitrate levels more than double the previous (Anzecc) limit score an 'A', while sites with more than four times the old limit score a 'B' and those with up to 15 times the limit score a 'C'.

A very similar process to this nitrogen example occurred with human health protection in freshwaters. The data shows that more than half of all monitored sites fail Health Ministry guideline levels. To get rid of this embarrassing statistic MfE shifted the minimum standard from 'contact recreation' to 'wadeable'. This sleight of hand combined with the nitrogen trick meant MfE could then write in its 'Environment Aotearoa 2015' report that most sites meet the standards for human health and nitrogen levels.

The third trick in the formula is to fiddle with trend statistics to make it appear that there is no change in water quality, implying that things are not getting worse.

To do this you select a short time period from a long data set, thereby reducing the number of data points analysed, so the possibility of any change being picked up is drastically reduced. For example, MfE use only the last 10 years of records from a 25 year data set sampled annually. By doing this it makes it virtually statistically impossible to get a statistically significant change.

This misrepresentation of reality has a name: agnotology. This term was coined by Stanford University's Robert Proctor, who studied the

antics of the tobacco industry. The definition of agnotology is: Culturally induced ignorance or doubt, particularly the publication of inaccurate or misleading scientific data to spread confusion and deceit, usually to sell a product or win favour.

It's not just our environment ministry indulging in agnotology; the Ministry for Primary Industries (MPI) is up to the same tricks when it comes to fisheries. To see the contradictions for yourself compare both Forest & Bird's 'best fish guide' and the recent fish dumping reports from independent Auckland University researchers, with the MPI reports and webpages.

Recently a team of young New Zealanders (Choose Clean Water) presented to the Local Government and Environment Select Committee a 14,000 strong petition to have 'swimability' as the bottom line for rivers, rather than 'wadeability'. Instead of being supported by MfE, the agnotological formula of spin and denial described above was trotted out by MfE staff to the committee.

I have come to expect agnotology from industry, but it makes me angry when it comes from 'public servants'.

I'm especially angry when a dedicated group of young people are undermined by the ministry tasked to support them. It is especially galling when you consider that the toxic legacy of freshwater pollution spun and denied by the ministry will most impact these young people.

Covering up and spinning the reality of environmental degradation fails us all. Am I asking too much to expect honesty from government departments? **WNZ**