

THE SENATE
STANDING COMMITTEE ON RURAL AND REGIONAL AFFAIRS AND TRANSPORT
Jeanette Radcliffe
Committee Secretary

Dear Madam

The Press have highlighted the plan to construct a Dam on the Rous River at Rocky Cutting, Eungella. I would suggest to you that this would be one of the worst places you could possibly choose for a dam site and even very extensive geological drilling would be on a 'hit and miss' basis that would be unlikely to identify the underlying geological faults unless you were exactly on top of them. You do not construct a major dam in an area where there have been numerous volcanoes, where each has uplifted the base rock formations of the former and buried massive ash and sedimentary deposits, where volcanic vents are under swamps and springs that will be covered by the proposed dam. The existing Clarrie Hall Dam has a rock and clay base, the proposed future Byrril Creek Dam also has a clay and rock base, both of these being away from the central structure of the volcano.

The geological history of the area needs to be identified, from 500m years ago to about 135m years ago this area was under the ocean. 30 million years ago the volcano crater that formed was huge with the outer Eastern crater now under the ocean, it had spewed out massive amounts of lava, ash and mud; over the next 10 million years the crater accumulated large deposits of alluvial sands and vegetative material as the forests thrived on the rich caldera. 20 million years ago (10m years later) massive volcanic action all the way to the Bunya Mounts changed the entire mountain structure, the original lava sheets were broken with some tipped upwards and the new lava flows covered the earlier deep deposits of ash, sand, sedimentary deposits and old vegetation, with new deep volcanic vents formed. The outer rim of this later volcano crater is also out under the ocean where large areas of column basalt was formed, the requirements to form column basalt is frequently associated with volcanic vents, logic would indicate to the analytical mind that vents would also be under the ocean and their connective structures are unknown.

The massive heat and pressure on the earlier strata caused disintegration of most of those earlier volcanic deposits, this is very evident in all samples, the new lava flow over sedimentary deposits created deep sandstone seams and ridges, coal, petrified woods, jaspers, the fracturing of the original base plates, gas and mud vents, formation of rhyolite seams; with contact metamorphism and gas explosions forming the agates, chalcedony, thunder-eggs and crystals.

Coal was mined for many years at Pumpenbil just South West of Tyalgum, to feed the boiler for the original electrical generation in Murwillumbah. Thus there are deep seams of sedimentary deposits, porous sand-stone and ash; these appear widely spread throughout the central crater of the Tweed Valley. We have sighted various old rock seams angled upwards that are now embedded in later lava flows, there are many deep areas of seriously decomposed old porous rock that are like blotting paper during heavy rain allow littler runoff of water. We use this for road-base material.

Sandstone was quarried in a limited way at Eungella and sandstone boulders were collected from several properties for building restoration. On my property during a dry period of time we had a serious land slip caused by decomposed sandstone sliding on the loose layer of sand underneath it. We have areas of alluvial sands with water washed white quartz stones on the sides of steep hills held in place by vegetation.

The proposed area for the new water storage is over numerous swampy areas of which many are mud filled volcanic vents, we have seen some in previous years releasing large volumes of gas over long periods. We put a boundary fence through a swampy area (the pioneers had fenced around it) as we dug through the crust of grass roots to put the posts in, a black oily smelling mud started oozing upwards that in 18 months rose upwards and covered the fence and filled the hollow, when the new fence was being built there a dark red oily smelling mud started oozing upwards and we believe it was only the lack of rain causing the surface to dry out creating a surface crust that stopped this continuing. The springs in this area are subject to atmospheric effect more so than I have identified in other areas of Australia, I have often wondered if this effect is caused by ocean pressure inside old volcanic vents. The old settlers told of there being one well that was dug that had salty water in it were the level would move up and down, it was subsequently filled in. I was told this story by a now deceased farmer and I cannot from recollection be sure, but I believe it was area near Brays Creek.

We note the whales and dolphins with their young congregate just off the coast for long periods, could this be due to fresh water vents under the ocean providing them with fresh drinking water for greater lactation?

This area is littered with springs that fluctuate with the phases of the moon as does tidal flow, often when a dam is built over springs progressively over time the head-weight of the water eventually stops the flow creating reverse osmosis with the water level lowering until a balance of head-pressure and centrifugal force of the spinning planet forcing the water upwards, is equalised. There are other dams that are always full to ground-level with perfect drinking water that never overflow, indicating a connection to a substrata basin. The proposed new dam will be over numerous spring and swampy areas with a high water head, the long term effect is unknown.

Another prime factor that must be considered is the underlying volcanic plates that move, these are directly under the proposed water storage area. We have at times had localised ground movements, you will in a localised area hear a loud 'thump' and feel the ground move, others will verify this fact. We have experienced the noise factor without feeling any movement as we sit on a sandstone ridge. These 'thumps' have occurred about four times in clusters over a two year period, in each case we heard a loud 'thump' and found an area where trees had trunks and limbs snapped off, the last major one was about 18 years ago in February on a hot night at 2-30 am. The noise of the extremely loud 'thump' woke everyone up with great concern fearing a serious accident on the road above, to the extent that we inspected the area. That not being the source we assessed it as another subterranean plate movement, this first identification I made was that none of the pictures on the wall had moved, so therefore no structural damage was made due to having a deep sandstone base under the building and the area of tree damage being three-quarters of a kilometre distant. The following day in the same area as before there were broken trees, one Tallow-wood (Eucalyptus) with a

very sturdy trunk that forked at about seven meters, had both forked limbs broken off. This species is a preferred power-pole and building material because of its durability; to shake this tree with such force enough to break the trunks must have been very considerable indeed, the more brittle *Banksia marginata* trees had many limbs broken.

This area is noted for 'dry-lightening' at night, there will be a clear sky full of dry-lightening all night for months; the energy fields for this effect are believed to be the result of moving plates compressing the crystal structures within, considerable studies on this have been done and reported in *New Scientist Magazine*.

A prime equation factor is the lack of rain in the Tyalgum area, several years ago for the first time in history the creeks totally dried up and Council had to cart water daily to keep the village alive, check their records; without rain an empty dam is of no value. We are currently in the fourteenth dry year, a bit stupid to propose a dam in a low rainfall area.

While this was a subtropical monsoonal area, we have been through fourteen years of drought on this property, several years ago we went from February to November with no rain in two consecutive years, and we had four days of heavy mist but still no rain. During this period there were excellent rains along the coast right into Murwillumbah caused by the moist ocean air and the coastal areas are still getting excellent rains while Tyalgum seriously needs rain.

My property 2 kms from Tyalgum has not had enough rain to run off into the dam for near three years, from 1st January to end of April 2007 we have had 261 ml of rain. To provide future water supplies requires dams being built on the coastal seaboard areas where the moist ocean airflows constantly produce rainfall. For many years now there has only been a trickle of water in these creeks, Limpinwood Valley was previously noted as one of our wettest areas has had the creek stop running at numerous times and currently is only a trickle. The catchments of these rivers and creeks are restricted entirely to the inside of the crater.

The above factors would make any serious investment into a dam of any substantial size at Rocky Cutting a very risky proposal indeed; in fact it would be a negligent and irresponsible act. You will look extremely stupid if the multi-million dollar dam has no rain to fill it and does not hold water--and I predict it may not.

Sincerely

G J May
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